1990 IUCN Red List of Threatened Animals

Compiled by the World Conservation Monitoring Centre





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IUCN - THE WORLD CONSERVATION UNION

Founded in 1948, IUCN – the World Conservation Union – is a membership organisation comprising governments, non-governmental organisations (NGOs), research institutions, and conservation agencies in 120 countries. The Union's objective is to promote and encourage the protection and sustainable utilisation of living resources.

Several thousand scientists and experts from all continents form part of a network supporting the work of its six Commissions: threatened species, protected areas, ecology, sustainable development, environmental law and environmental education and training. Its thematic programmes include tropical forests, wetlands, marine ecosystems, plants, the Sahel, Antarctica, population and sustainable development, and women in conservation. These activities enable IUCN and its members to develop sound policies and programmes for the conservation of biological diversity and sustainable development of natural resources.

WCMC - THE WORLD CONSERVATION MONITORING CENTRE

The World Conservation Monitoring Centre (WCMC) is a joint venture between the three partners in the World Conservation Strategy, the World Conservation Union (IUCN), the World Wide Fund for Nature (WWF) and the United Nations Environment Programme (UNEP). Its mission is to support conservation and sustainable development by collecting and analysing global conservation data so that decisions affecting biological resources are based on the best available information.

WCMC has developed a global overview database of the world's biological diversity that includes threatened plant and animal species, habitats of conservation concern, critical sites, protected areas of the world, and the utilisation and trade in wildlife species and products. Drawing on this database, WCMC provides an information service to the conservation and development communities, governments and United Nations agencies, scientific institutions, the business and commercial sector, and the media. WCMC produces a wide variety of specialist outputs and reports based on analyses of its data.

1990 IUCN Red List of Threatened Animals

Prepared by the

World Conservation Monitoring Centre Cambridge, U.K.

In association with the
IUCN Species Survival Commission
and the
International Council for Bird Preservation

Guest Essay by

Dr Nathan Flesness and Dr Tom Foose

of the

IUCN/SSC Captive Breeding Specialist Group

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FOREWORD

The Red List of species threatened with extinction is an international bulletin board alerting people to particulars of the diminishment of biodiversity worldwide. It is a very incomplete list, for, as Bruce Wilcox indicated in the last edition of the Red List, there are likely millions of inconspicuous species that are unclassified and that likely will be extinct before we know them scientifically. Nevertheless, the Red List and the Red Data Books of IUCN – the World Conservation Union, have served to stimulate many countries to assess the conservation status of their floras and faunas more extensively and completely. In response, laws and regulations to protect and conserve endangered species have been instituted nationally and internationally. There have also resulted more programmes to rescue endangered species under the protection of national parks, reserves, zoological parks, aquariums, and botanical gardens. And more habitat restoration and species reintroductions are now underway.

Yet catastrophic extinction waves are still before us if current practices and growth of human populations continue. The advent of a world convention or treaty on the conservation of biological diversity under the aegis of IUCN and the United Nations Environment Program is therefore a timely and much needed development to help stem the extinction tide. The member governments and organizations of IUCN should attend as rapidly and closely as possible to this opportunity to promote more effective conservation of living natural resources globally.

The principal users of this slim volume are no doubt already concerned or involved in aspects of species and habitat conservation. Yet all may not be aware of the complementary work of the IUCN to galvanize conservation efforts on behalf of Red List and other species. The reference here is to the Action Plan programme of IUCN's Species Survival Commission, which is a comprehensive scheme to specify the conservation status, priorities, and actions needed for many groups of plants and animals. Fifteen such plans by SSC Specialist Groups have been published, and several more are in preparation. Also in publication is a regional action plan for Sub-Saharan Africa compiled by Simon Stuart.

It is our hope that implementation of the SSC Action Plans can and will be followed by governments and non-governmental organizations, aided and assisted where possible by the SSC volunteer network of experts. Great encouragement of the overall Action Plan programme has been received this year through the Peter Scott Memorial Appeal. A generous gift from the Government of Oman will foster continuing preparation of the plans and first steps in implementation of those that have been completed. It is, of course, very fitting that Sir Peter Scott be remembered in this way, for he was the founder of the Species Survival Commission, the Red Data Books, and the Action Plan idea. There is a clear challenge to us to be as thoughtful and creative in continuing the work that he started.

In carrying on, the SSC has undertaken to re-examine the traditional categories used in classifying the conservation status of species. There is consequently now a study by Georgina Mace and Russell Lande examining extinction danger from the standpoint of population biology. There will be other studies relating to this question, including an attempt to rate extinction risks from causative human

acitivities. In this way, future Red Lists may become increasingly precise and compelling as they succinctly signal the condition of the world's heritage of species. Meanwhile, we must take up the cause of whole groups of species whose existence is suddenly imperilled – amphibians and sharks are immediate examples, with very different causational factors implicated.

Another approach to priorities in the conservation of biodiversity is identifying places rich in species and concentrating action on preservation and protection of these areas, labelled "hot spots" by Norman Myers. Recently, Russell Mittermeier has extended this idea to the political geography of the world and identified megadiversity countries that deserve focussed conservation attention. A suggested Green List of species important ecologically, evolutionarily, or economically may be another worthwhile venture. Such initiatives as well as the Red List are all valuable in reinforcing the message that people and their governments must act now if we are to conserve the world's natural heritage.

In closing, it is appropriate to acknowledge the extraordinary effort made by Jane Thornback in compiling this and previous Red Lists. It is also fitting to note that such labour and the expenses of producing the Red List, the Red Data Books, the SSC Action Plans, and related publications will be in vain unless conservationists of all kinds work to see that there are indeed adequate responses to the warnings of irrevocable losses of species that these publications provide. May this book's readers so commit themselves for the benefit of future generations.

George B. Rabb Chairman, Species Survival Commission IUCN, The World Conservation Union

INTRODUCTION

The IUCN Red List of Threatened Animals is a list of those taxa known by IUCN to be threatened with extinction. It complements the IUCN Red Data Books and the IUCN Species Action Plans, both of which contain more detailed information on the conservation status of species.

IUCN'S threatened animal list is compiled and maintained for IUCN by the World Conservation Monitoring Centre (WCMC) with the assistance of the International Council for Bird Preservation (ICBP). The list is published periodically. For each threatened taxon, the list includes its scientific name, english common name, IUCN threat category and a brief description of its distribution.

The threatened species list is based on information provided by numerous scientists and naturalists working in the field. The information may arrive at IUCN in the form of published and unpublished reports, books and correspondence. Much of the information is collated together by the Species Specialist Groups of IUCN's Species Survival Commission (SSC) and the Working Groups of the ICBP.

The threat category assigned to a species is determined by a review of the factors impinging on a species and the extent of the effect that these are having. Key factors that are examined include the change in distribution, change in numbers, degree and type of threat, population biology of the species and the level of conservation committment and resources that the species is likely to benefit from. Currently, IUCN is reviewing new methods of assigning species threat categories.

The number of threatened taxa identified by IUCN is just over 5000, comprised of 698 mammals, 1047 birds, 191 reptiles, 63 amphibians, 762 fishes and 2250 invertebrates. Except for birds, for which ICBP have now attempted a global review, these numbers represent only those taxa known by IUCN to be threatened. Many, many more taxa are threatened, many of them as yet undescribed by science. The number of taxa listed in the Red List is therefore only a fraction of the numbers it might be. Biodiversity in all its forms is being lost at a rate far exceeding that of any earlier extinction phase. Added to the major threats of habitat loss and overexploitation must now be added the impending threat of climate change. This will have a far reaching effect on conservation of biodiversity since the role of national parks and protected areas will be undermined especially with regard to plant and invertebrate conservation.

The IUCN threatened species list is constantly under review, with changes arising as new studies are undertaken or as previously unreviewed groups are examined by conservationists. Any relevant information on the status of species should be sent to IUCN or WCMC:

Red List Inventory World Conservation Monitoring Centre 219c Huntingdon Road, Cambridge CB3 0DL United Kingdom

Fax: 0223 277136



GUEST ESSAY

THE ROLE OF CAPTIVE BREEDING IN THE CONSERVATION OF SPECIES

Nathan R. Flesness and Tom J. Foose

We have borrowed the Earth from our children, and are defaulting on the loan. Their planet will have less ability to sustain life, and less ability to sustain wonder.

There is understandable disagreement as to just exactly how many million fewer species there will be. Whatever the total, whatever terms used to measure it, we are witnessing a very rare event — a large scale reduction in the life forms on Earth. Such a loss of *kinds* of life seems to have happened only a few times in the last billion years, perhaps associated with the rare and catastrophic collision of Earth and a large meteor. Now, of course, we are seeing the catastrophic collision of Earth with an unprecedentedly large and powerful human population.

With such grand and terrible events going on, with a scale in the millions, what is the possible role of captive breeding programs for one or two thousand species?

One answer comes from the non-random pattern of the extinctions we are seeing. Though we are losing many uniquely adapted mice species, "mice" as a broad guild of creature, will certainly survive the next century or two. So will fox and coyote, thanks in part to the mice. But the larger carnivores—the grizzly, the tiger, the lion, the condor, the crocodile and crane, need larger and wilder space. Most such species are or will be at risk. The large herbivores—the rhino, elephants, desert antelopes, etc. not only need large areas of habitat but are commonly eliminated by human activity even before their habitat is. High cash value wild plants, such as orchids or exotic tropical hardwood trees are disappearing because of excessive harvest, not herbivores. Life forms that are large, slow-reproducing, insular, specialized for climax ecosystems, or have high cash value of harvest, are much less likely to be a part of the future ecology of the planet.

Sadly, we will lose more species of mice in the future, but not all mice. The same is true a thousand-fold for beetles. But we may lose all the rhino, and many or most of the broad group of wild mammals over 25kg or so. Similar perspectives but with different thresholds apply to birds, herps, fish, invertebrates, and plants. Humans naturally have often interacted deeply with life-forms that are very visible (birds, for example) or are within an order of magnitude of our own size. Loss of any species is a tragedy, but the larger forms—the elephant, buffalo, wolf, crane, and so on, have played particularly important roles in human ecology and culture. Many such species are, have been, and could again become important economically when we finally and inevitably make the transition to a sustainable society. Moreover, many such organisms have a special role in the heritage of peoples, or are of special religious importance. Or, in extremis, as phrased by Bill Conway, "Are not some creatures so marvellous and so important to our concept of Earth that they should be preserved when all traces of their evolutionary homes are gone?".

Tabulations by the World Conservation Monitoring Centre indicate that 3.7% of the land area of the Earth is now protected. Most of the rest is or will be developed or managed for human purposes so intensively that biological diversity will be greatly reduced. Some of the 3.7% is protected only on paper, some of it is under visitor parking lots. Because our species reserves 96% of the land surface for our own direct utilization, we had best learn or relearn ways to retain diversity in these unprotected areas as well.

The emerging science of Conservation Biology has provided a crude tool — Population Viability Analysis — to help evaluate persistence probabilities of populations over time, and to help rank and quantify both the various risks to survival, and the impacts of potential protective measures. When this PVA tool is applied to problem species, the answer most often produced is that not enough "wild" is left, that the species of interest is at risk from a combination of deterministic and stochastic factors, and at greater risk than our intuition expected. Setting aside 3.7% of the earth to protect life in general will not suffice, especially for large and top-of-the-food-chain creatures. We must protect more habitat, but often there is none left to protect outside of existing reserves.

Most habitat protection has necessarily been opportunistic. Many protected areas are now being found inadequate for the longer term. Often the "flagship" taxon, in whose name the area was initially protected does not have a reasonable chance of surviving in the area over time spans of the next century or two.

So why captive breeding? Aldo Leopold answered this with a striking aphorism—"the first rule of intelligent tinkering is to save all the pieces". Human activity, or tinkering, scores dismally on this intelligence test. The sum total of all our conservation activities (enormously smaller than our development activities) is failing to save anywhere near *all* of the pieces. The stakes have come down to saving *some* of the pieces.

Captive breeding can buy time. Time to correct a management error, time to stop human over-exploitation, time even to practice restoration ecology and restore some habitats — for which you need the pieces (species). Surely, re-introduction science and restoration ecology will themselves continue to make progress. In the most desperate cases, captive breeding can preserve valuable and fascinating living monuments to a wild that once was — time for our descendants to at least marvel at life, not just stuffed and ageing skins. In better cases, captive breeding may help buy time by augmenting an ongoing "wild" population which is too small to have a good chance of persistence without supplementary reservoir of both individuals and genes. In other cases, extinction of wild populations will someday be followed by complete re-introduction from captive-bred and sustained populations. Such programs have been accomplished in the past and have an even better chance in the future now that serious science and science-based patience are applied.

Some of course disagree, arguing instead that species cannot or should not be maintained *ex situ*. Such views would deny preservation and conservation options to all future generations. It is hard not to see this as profoundly arrogant.

The world's two bison species are historical examples of the role which captive breeding can play. The American bison (Bison bison) were reduced by Caucasian settlement from an estimated initial 60,000,000 to less than 1,000 by 1889. The

magnificent animals that today roam several protected areas in the American West were re-established beginning in 1907 with stock intentionally bred for this purpose at the Bronx Zoo (a wild remnant population estimated at 200 did survive in the then-new Yellowstone National Park). The equally magnificent European bison, or wisent (Bison bonasus) was completely exterminated in the wild in 1921, but was bred in zoos starting from 12 animals in 1913. Zoo bred stock was successfully re-introduced in 1956 into the remaining wild—the Bialoweiza Park—on the border of Poland and the U.S.S.R, where these animals thrive today.

Another important historical example is the Mongolian wild horse (Equus przewalski). A zoo population was established 1898-1900, with one additional wild-caught animal added in 1947. The species subsequently became extinct in the wild. Plans for re-introduction from zoo stock are now developing in Mongolia, China, and the U.S.S.R. What remains of this species has been sustained in captivity for as many as 14 generations.

In more recent years, two major improvements have occurred in the application of captive breeding to species preservation and conservation problems. One advance is the development and application of serious science to the re-introduction process. Though early efforts were occasionally successful, as mentioned above, most re-introductions were very casual in methodology and very mediocre in results. Modern approaches are exemplified by the Arabian oryx (Oryx leucoryx) which was hunted to extinction in the early 1970s but rescued by zoo-based captive breeding, then very successfully and scientifically re-introduced into Oman with the sponsorship of the Omani royal family under the leadership of Mark Stanley-Price. This species has since been re-introduced into another part of its original range, in Jordan. These experiences have led to an active IUCN/SSC/Re-introduction Specialist Group. Similarly serious scientific approaches are being taken in planning re-introductions of both the California condor (Gymnogyps californianus) and the Black-footed ferret (Mustela nigripes). Both of these are now extinct in the wild. After controversy delayed capture of the last several wild individuals of each, both are now successfully breeding in captivity. The high fecundity ferrets should be back in the wild less than a decade after their extinction. Captive breeding is being applied in numerous other cases as one tool to help in re-establishing species in areas from which they have been extirpated.

The second major advance is the development of cooperative national, regional, and international conservation management plans for zoo populations of important taxa. From early beginnings in the Anthropoid Ape Advisory Panel and Joint Management of Species Group in the United Kingdom and the development of the Species Survival Plans (SSP) by the American Association of Zoological Parks and Aquariums a decade ago, these cooperative captive conservation programs have expanded to include the Europaiesches Erhaltungszucht Program (EEP) program in zoos in Europe, Species Management Program (SMP) in Australasian zoos, developing programs in the Japanese Association of Zoological Gardens and Aquaria, and elsewhere. Over 150 taxa of all classes of vertebrates as well as the invertebrate genus Partula (endemic land snails of Moorea, now extinct in the wild) are now managed cooperatively by groups which total about 400 institutions (about half of the world's recognized zoos and aquariums). These programs use detailed population datasets (both individually-compiled studbooks and the International

Species Information System (ISIS) zoo database network) and contemporary population-and-conservation-biology analysis to support explicit conservation goals. Prime goals are retention of genetic diversity and maintenance of demographic stability (at the right time, generation of surplus for re-introduction). New programs, and coordination and linkage of existing national and regional programs, are being developed through the very active IUCN/SSC/Captive Breeding Specialist Group.

IUCN has already recognized the logic and contributions of captive breeding in the published IUCN Policy Statement on Captive Breeding, 4 Sept. 1987. This document makes the important point that captive breeding programs should be initiated when the wild population is still in the thousands. All too typically, as in the ferret and condor cases, captive options have been resisted until the wild population is less than 20(!), genetic erosion has already begun, the population is at maximum risk and there is no room or time for error, or for learning captive husbandry requirements.

Captive breeding is likely to buy time mostly for megafauna and attractive flora, as there are pre-existing institutions (and publics) interested in them and increasingly dependent on their propagation. Zoological gardens worldwide plan to expand from the 150 species now involved in multi-institution coordinated breeding programs, to perhaps 1,000 species. Botanical gardens are developing programs which may match or exceed this number.

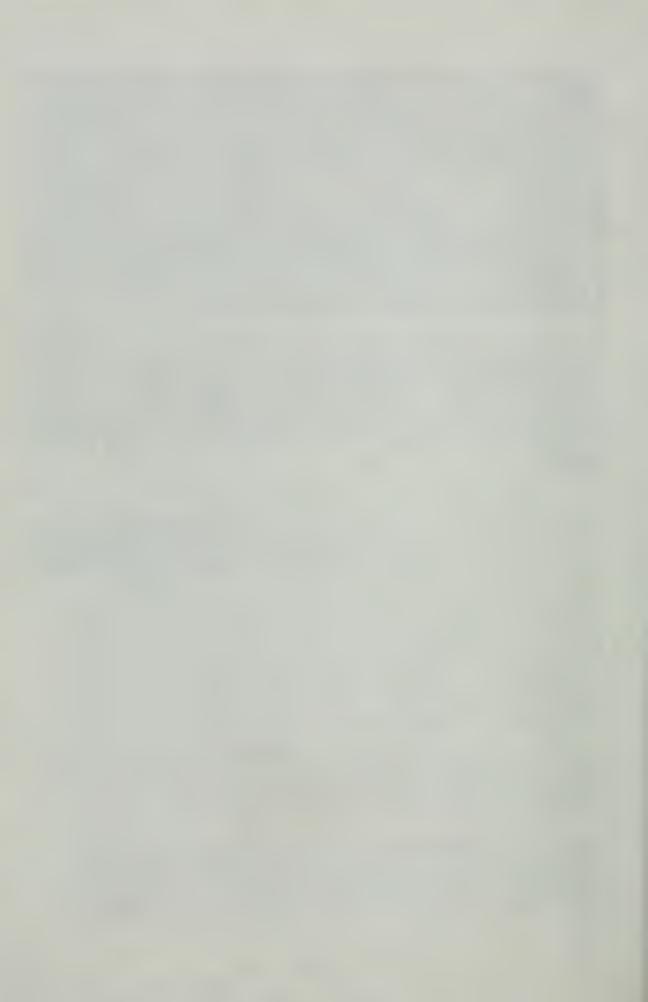
Beyond the fact that the megafauna as a whole is uniquely threatened, captive propagation itself has disproportionate impact. The reasons are multiple:

- The public cares, and cares most about what it can see close to home. This care can be mobilized over time to change laws to better protect habitats and their occupants, protect more areas, even start habitat-restoration projects. Zoological and botanical exhibits of living creatures contribute substantially to nurturing emotional bonds between wild species and urban humans. Captive breeding of species at risk draws further powerful attention people see the threatened "flagship" creature or plant in television or printed news media and can often go see it in person (or live on videocamera) at the nearby breeding zoo or garden. We are in the early stages of learning to harness this resource, but such attention has already been used to change detrimental laws (Bison, Black footed ferret), acquire and protect new habitat areas (Red wolf, innumerable Nature Conservancy areas) and even start ecosystem restoration projects (Round Island, Mauritius, St Helena).
- The megafauna has large ecological impact. Even though other taxa may have higher total body mass per hectare, megafaunal species often have major effects on succession and patchiness of habitats. If we don't save these pieces for future restored ecosystems, we may have to build robots to emulate their "keystone" roles.
- The megafauna requires the most room. Mobilizing public interest in them generates pressure for adequate wild habitat areas large enough to operate as at least partially functional ecosystems and large enough to protect innumerable other taxa which can quietly thrive under their megafaunal "umbrella".

It is imperative that zoological and botanical institutions and other specialized facilities continue to increase their focus on threatened taxa. Broad scale review of taxa in need of captive propagation, institutional holdings and capacity, and demonstrated captive-breeding competence, is now being carried out as an integral part of the development of IUCN/SSC Action Plans. The collective zoological capacity is about 560,000 live specimens (International Zoo Yearbook, Vol. 26). Considerable collective competence with thousands of species is in hand. For example, ISIS data indicate that 92% of new zoo mammals are bred in captivity. Captive propagation facilities are developing, and must sustain, genetically and demographically sound captive-bred populations of hundreds, perhaps thousands, of wisely selected taxa. This role is well beyond that imagined when most of these institutions were established, and is beyond that even understood today by many of their funding sources. Nevertheless these programs are making increasingly real contributions to preserving some of the Earth's living heritage.

There will not be a single solution to the biodiversity crisis — it is simply too overwhelming. With luck there will be lots of little answers, each tapping different resources not available to the others, each contributing different pieces to a patchwork solution. This 1990 IUCN Red List identifies species known to be of special concern. Surely we want the readers of the 2000 IUCN Red List and the 2100 IUCN Red List, to find very few additional species marked Ex-extinct. In increasingly many cases, captive breeding is the only way we can keep this from happening.

Nathan Flesness and Tom Foose IUCN/SSC Captive Breeding Specialist Group 12101 Johnny Cake Ridge Road, Apple Valley Minnesota 55124-8199, USA



INVENTORY REPORT FORM

Report to be mailed to Species Inventory Project, The World Conservation Monitoring Centre, 219(c) Huntingdon Road, Cambridge, CB3 ODL, U.K.

- 1. Country
- 2. Date
- 3. Reporter

Name:

Address:

4. Taxon

Scientific Name:

Common Name:

5. Distribution

Present:

Former:

If possible, please include a map. Is present range preferred or enforced habitat?

6. Population

Estimated numbers in the wild. Indicate date of estimate and describe method of estimation. Are numbers increasing, decreasing or stable?

7. Habitat and Ecology

Biome type. Elevation range. Brief notes about social structure, feeding habits and diet, reproduction (gestation, breeding season, number of young, age of sexual maturation), longevity etc.

8. Scientific interest and potential value

Use in scientific or medical research; commercial value in trade or local economy.

9. Threats

E.g. habitat destruction, over-exploitation, hybridization, natural disasters, competition for food, introductions.

10. Conservation Measures Taken

Legal measures (international conventions, national laws); is law enforced? Protected areas – does it occur in national parks, reserves etc.? If so, please list. Management programmes or research programmes in progress.

11. Conservation Measures Proposed

Same as for 10, but measures that are needed for the conservation of the taxon.

12. Captive Breeding

Numbers in captivity - use ISIS or International Zoo Yearbook. Does it breed readily in captivity?

13. Remarks

Reference citations for description of animal. Comments about related taxa. If the above information concerns a subspecies then brief information should be given about the distribution and status of the species as a whole. Special acknowledgements etc.

14. References

Can be published papers, unpublished manuscripts, or references to correspondence (cited as In litt.).

DOCUMENTS ON WHICH THE IUCN RED LIST IS BASED

The listing of species in the IUCN Red List of Threatened Animals is based on the information contained in the publications listed below, and on the advice and guidance of the Species Specialist Groups of the IUCN Species Survival Commission. The IUCN/SSC has published recently numerous Species Action Plans which contain extensive information on the conservation status of species. The listings of threatened birds are provided by the International Council for Bird Preservation (ICBP).

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TAXONOMY

The systems of classification and nomenclature principally follow the undermentioned authors.

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IUCN THREATENED SPECIES CATEGORIES

Species identified as threatened by IUCN are assigned a category indicating the degree of threat. Definitions are as follows:

EXTINCT (Ex)

Species not definitely located in the wild during the past 50 years (criterion as used by the Convention on International Trade in Endangered Species of Wild Fauna and Flora).

N.B. On a few occasions, the category Ex? has been assigned; this denotes that it is virtually certain that the taxon has recently become extinct.

ENDANGERED (E)

Taxa in danger of extinction and whose survival is unlikely if the causal factors continue operating.

Included are taxa whose numbers have been reduced to a critical level or whose habitats have been so drastically reduced that they are deemed to be in immediate danger of extinction. Also included are taxa that may be extinct but have definitely been seen in the wild in the past 50 years.

VULNERABLE (V)

Taxa believed likely to move into the "Endangered" category in the near future if the causal factors continue operating.

Included are taxa of which most or all the populations are decreasing because of over-exploitation, extensive destruction of habitat or other environmental disturbance; taxa with populations that have been seriously depleted and whose ultimate security has not yet been assured; and taxa with populations that are still abundant but are under threat from severe adverse factors throughout their range.

N.B. In practice, "Endangered" and "Vulnerable" categories may include, temporarily, taxa whose populations are beginning to recover as a result of remedial action, but whose recovery is insufficient to justify their transfer to another category.

RARE (R)

Taxa with small world populations that are not at present "Endangered" or "Vulnerable", but are at risk.

These taxa are usually localised within restricted geographical areas or habitats or are thinly scattered over a more extensive range.

INDETERMINATE (I)

Taxa known to be "Endangered", "Vulnerable" or "Rare" but where there is not enough information to say which of the three categories is appropriate.

INSUFFICIENTLY KNOWN (K)

Taxa that are *suspected* but not definitely known to belong to any of the above categories, because of lack of information.

K* Taxa which are currently under review by ICBP and which will be designated a category in the near future.

THREATENED (T)

Threatened is a general term to denote species which are "Endangered", "Vulnerable", "Rare", "Indeterminate", or "Insufficiently Known" and should not be confused with the use of the same term by the U.S. Office of Endangered Species. In this volume it is also used to identify taxa comprised of several sub-taxa which have differing status categories.

COMMERCIALLY THREATENED (CT)

Taxa not currently threatened with extinction, but most or all of whose populations are threatened as a sustainable commercial resource, or will become so, unless their exploitation is regulated.

This category applies only to taxa whose populations are assumed to be relatively large.

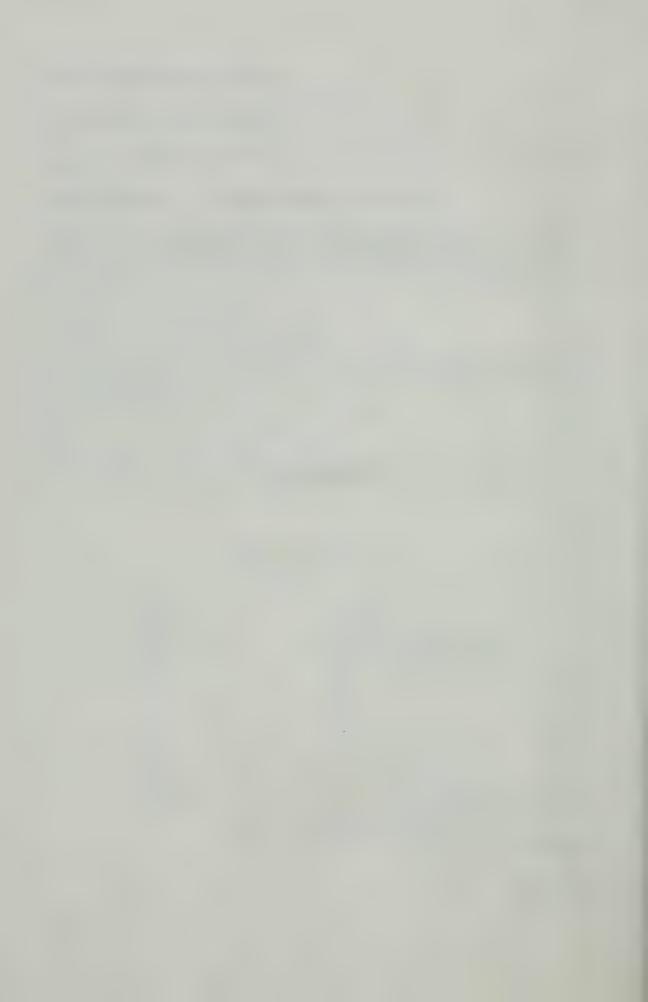
N.B. In practise, this category has only been used for marine species of commercial importance that are being overfished in several parts of their ranges.

ABBREVIATIONS

Arch.	Archipelago
Eq. Guinea	Equatorial Guinea
F.R.G.	Federal Republic of Germany
F.S.M.	Federated States of Micronesia
I.	Island
Is	Islands
0.	Ocean
sp.	Unnamed species
U.A.E.	United Arab Emirates
U.K.	United Kingdom
U.S.A.	United States of America
U.S.S.R.	Union of Soviet Socialist Republics
	Former Distribution
*	An important, introduced nonulation

1990 IUCN RED LIST OF THREATENED ANIMALS

MAMMALS



Class MAMMALIA

Order MONOTREMATA Family Tachyglossidae Zaglossus bruini

Family Macropodidae Order MARSUPIALIA

Dendrolagus goodfellowi shawmayeri Dendrolagus dorianus notatus Caloprymnus campestris Bettongia penicillata Bettongia lesueur

Dorcopsulus macleayi Dorcopsis atrata

- 1 -

Lagorchestes asomatus Lagorchestes leporides Lagorchestes hirsutus

Lagostrophus fasciatus Macropus greyi

Onychogalea fraenata Petrogale persephone Onychogalea lunata

Potorous longipes Potorous platyops Family Phalangeridae Phalanger lullulae

Phalanger permixtio Phalanger rufoniger Phalanger vestitus

Long-beaked Echidna

Phylum CHORDATA

New Guinea

>

Goodfellow's Tree-kangaroo Doria's Tree-kangaroo Desert Rat-kangaroo

Brush-tailed Bettong

Burrowing Bettong

Slack Dorcopsis Wallaby

Papua New Guinea

New Guinea

Australia

Australia

Australia

Papua New Guinea Papua New Guinea

Australia]

Australia Australia

Australia Australia Australia

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Central Hare-wallaby Rufous Hare-wallaby Papuan Dorcopsis

Eastern Hare-wallaby Banded Hare-wallaby Toolache Wallaby

Crescent Nailtail Wallaby Proserpine Rock-wallaby Bridled Nailtail Wallaby

Australia

Australia Australia Australia

Long-footed Potoroo **Broad-faced Potoroo** Woodlark Island Cuscus

Black-spotted Cuscus Cuscus Cuscus

Woodlark I. (Papua New Guinea) 回

Papua New Guinea New Guinea

New Guinea

V Australia	E Australia	Ex [Australia] R New Guinea R Australia Ex [Australia]	E Australia Ex [Australia]	I Australia I Australia I Australia K Australia K Australia	E Australia	Ex [Tasmania]
Leadbeater's Possum	Northern Hairy-nosed Wombat	Pig-footed Bandicoot White-lipped Bandicoot Western Barred Bandicoot Desert Bandicoot	Greater Bilby Lesser Bilby	Dibbler Red-tailed Phascogale Julia Creek Dunnart Long-tailed Dunnart Sandhill Dunnart	Numbat	Thylacine
Family Petauridae Gymnobelideus leadbeateri	Family Vombatidae Lasiorhinus krefftii	Family Peramelidae Chaeropus ecaudatus Echymipera clara Perameles bougainville Perameles eremiana	Family Thylacomyidae Macrotis lagotis Macrotis leucura	Family Dasyuridae Antechinus apicalis Phascogale calura Sminthopsis douglasi Sminthopsis longicaudata Sminthopsis psammophila	Family Myrmecobiidae Myrmecobius fasciatus	Family Thylacinidae Thylacinus cynocephalus

Order INSECTIVORA Family Solenodontidae

Solenodon cubanus Solenodon paradoxus

Cuba

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Cuban Solenodon

Family Tenrecidae

Microgale melanorrhachis Microgale prolixacaudata Geogale aurita orientalis Microgale longicaudata Microgale brevicaudata Microgale longirostris Microgale occidentalis Geogale aurita aurita Microgale principula Limnogale mergulus Microgale drouhardi Microgale crassipes Microgale parvula Microgale gracilis Microgale thomasi Microgale majori Microgale sorella Microgale pulla Microgale taiva

Family Potamogalidae Micropotamogale lamottei Micropotamogale ruwenzorii

E Hispaniola	K Madagascar	Madagascar	Madagascar	K Madagascar	K Madagascar	K Madagascar	K Madagascar	K Madagascar	K Madagascar	K Madagascar	K Madagascar	Madagascar	K Madagascar	K Madagascar	Madagascar	K Madagascar	K Madagascar	K Madagascar	K Madagascar	E. Grines Cote d'Ivoire
Haitian Solenodon	Large-eared Tenrec	Eastern Large-eared Tenrec	Aquatic Tenrec	Short-tailed Shrew-tenrec	Large-footed Shrew-tenrec	Drouhard's Shrew-tenrec	Gracile Shrew-tenrec	Lesser Long-tailed Shrew-tenrec	Long-nosed Shrew-tenrec	Major's Lesser Long-tailed Shrew-tenrec	Striped Shrew-tenrec	Western Short-tailed Shrew-tenrec	Pygmy Shrew-tenrec	Greater Long-tailed Shrew-tenrec	Northern Lesser Long-tailed Shrew-tenrec	Dark Pygmy Shrew-tenrec	Long-tailed Shrew-tenrec	Taivi Shrew-tenrec	Thomas's Shrew-tenrec	Nimba Otter-shrew

Family Chrysochloridae Amblysomus gunningi Amblysomus iris Amblysomus iris Amblysomus julianae Chlorotalpa duthiae Chlorotalpa obtusirostris Chlorotalpa sclateri Chlorotalpa stonis Chrysochloris visagiei Chrysospalax trevelyani Chrysospalax villosus Cryptochloris wintoni Cryptochloris zyli
Family Chrysochloridae Amblysomus gunningi Amblysomus iris Amblysomus iris Amblysomus julianae Chlorotalpa duthiae Chlorotalpa sclateri Chlorotalpa sclateri Chrysochloris visagiei Chrysospalax trevelyani Chrysospalax willosus Cryptochloris wintoni

Family Erinaceidae Podogymnura truei Atelerix frontalis

Family Talpidae Galemys pyrenaicus Desmana moschata

Crocidura congobelgica Family Soricidae Crocidura ansellorum Crocidura crenata Crocidura eisentrauti Crocidura grassei Crocidura baileyi Crocidura glassi

South Africa	South Africa	South Africa	South Africa	Mozambique, Zimbabwe, South Africa	South Africa	Somalia	South Africa	South Africa	South Africa	South Africa	South Africa	South Africa, Namibia
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Gunning's Golden Mole	Zulu Golden Mole	Juliana's Golden Mole	Duthie's Golden Mole	Yellow Golden Mole	Sclater's Golden Mole	Somali Golden Mole	Visagie's Golden Mole	Giant Golden Mole	Rough-haired Golden Mole	De Winton's Golden Mole	Van Zyl's Golden Mole	Grants' Golden Mole

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Southern Africa Philippines

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K Zaire	K Rwanda, Zaire	K Zaire	K Nigeria	K Ethiopia	K Zaire				_	_	K Ethiopia	K Zaire	K Kenya		K Zaire	K Tanzania	K Tanzania	K Ethiopia	K Sao Tome	K Tanzania	K Cote d'Ivoire		K Cameroon, Eq. Guinea		K South Africa		K Zaire		K Rwanda, Uganda, Zaire		K Tanzania
							Maquassie Musk Shrew			Giant African Forest Shrew															Long-tailed Forest Shrew					Gabon Dwarf Shrew	
Grocidura kinuana	Crocidura lanosa	Crocidura latona	Crocidura longipes	Crocidura lucina	Crocidura ludia	Crocidura manengubae	Crocidura maquassiensis	Crocidura monax	Crocidura nimbae	Crocidura odorata goliath	Crocidura phaeura	Crocidura polia	Crosidura rainevi	Crosidura selina	Craidira stenocenhala	Crosiding tonsoniona	Crosidura telfordi	Crocidura tholia	Crocidura thomensis	Crocidura usambarae	Crocidura wimmeri	Crocidura zimmermanni	Mosorex eisentrauti	Myosorex Peata	Myosorex longicandatus	Myosorex polli	Myssorex schalleri	Paracrocidura graueri	Paracrocidura maxima	Suncus remyi	Sylvisorex howelli

Sylvisorex suncoides Sylvisorex ollula

Petrodromus tetradactylus sangi Rhynchocyon cirnei hendersoni Family Macroscelididae Rhynchocyon cirnei cirnei Rhynchocyon chrysopygus Rhynchocyon petersi

Family Pteropodidae Order CHIROPTERA

Otopteropus cartilagonodus Dobsonia exoleta chapmani Alionycteris paucidentata Dyacopterus spadiceus Dyacopterus brooksi Megaerops kusnotoi Aproteles bulmerae Latidens salimalii Nyctimene rabori Dobsonia minor Acerodon lucifer

Pteropus livingstonei Pteropus mariannus Pteropus macrotis

Pteropus insularis

Pteropus phaeocephalus Pteropus molossinus Pteropus pilosus Pteropus niger

Black-and-Rufous Elephant-shrew Golden-rumped Elephant-shrew Chequered Elephant-shrew Chequered Elephant-shrew Four-toed Elephant-shrew

Panay Giant Fruit Bat

Lesser Naked-backed Fruit Bat Chapman's Fruit Bat **Bulmer's Fruit Bat**

Dayak Fruit Bat

Philippines Tube-nosed Fruit Bat Javan Tail-less Fruit Bat

Comoro Black Flying Fox Big-eared Flying Fox Marianna Flying Fox Fruk Flying Fox

Large Palau Flying Fox Mauritian Flying Fox Mortlock Flying Fox Pohnpei Flying Fox

Cameroon, Gabon, Zaire Rwanda, Uganda, Zaire

Kenya Kenya

Mozambique **英張孫**

Malawi

Kenya, Tanzania, Pemba I., Zanzibar

Panay I. (Philippines)] Mindanao (Philippines)

New Guinea

Cuba, Hispaniola

M

Cuban Flower Bat

Phyllonycteris poeyi

 E Rodrigues E American Samoa, W. Samoa, Fiji V Aldabra I. (Seychelles) Ex [Mauritius, Reunion] Ex [Guam (U.S.A.)] I Karkar I. (New Guinea) to Samoa E Pemba I. (Tanzania) 	E Seychelles K New Guinea K Seram I., New Guinea, Solomons	R Thailand	V N. Australia	R Biak I. (Indonesia) I Singapore, Pen. Malaysia, Sabah K N. Australia	V S. U.S.A. to Guatemala V S. U.S.A. to El Salvador K Jamaica Ex? Puerto Rico
Rodrigues Flying Fox Samoan Flying Fox Seychelles Flying Fox Lesser Mascarene Flying Fox Guam Flying Fox Insular Flying Fox Pemba Flying Fox	Seychelles Sheath-tailed Bat Greater Sheath-tailed Bat Raffray's Sheath-tailed Bat	Kitti's Hog-nosed Bat	Ghost Bat	Geelvinck Bay Leaf-nosed Bat Ridley's Leaf-nosed Bat Orange Leaf-nosed Bat	Mexican Long-nosed Bat Little Long-nosed Bat Jamaican Flower Bat Puerto Rican Flower Bat
Pteropus rodricensis Pteropus samoensis Pteropus seychellenis aldabrensis Pteropus subniger Pteropus tokudae Pteropus tonganus	Family Emballonuridae Coleura seychellensis Emballonura furax Emballonura raffrayana	Family Craseonycteridae Craseonycteris thonglongyai	Family Megadermatidae Macroderma gigas	Family Hipposideridae Hipposideros papua Hipposideros ridleyi Rhinonicteris aurantia	Family Phyllostomatidae Leptonycteris nivalis Leptonycteris yerbabuenae Phyllonycteris aphylla Phyllonycteris major

Family Vespertilionidae

Kerivoula africana

Myzopoda aurita

Family Mystacinidae

Lasiurus cinereus semotus

Myotis bartelsii

Myotis capaccinii Myotis dasycneme

Myotis grisescens

Myotis hermani

Glischropus javanus

Africa

Tanzania Madagascar	Java (Indonesia) Hawaii (U.S.A.) Java (Indonesia) Europe, S. Asia Minor, N.W. Europe to Siberia U.S.A. N.W. Sumatra (Indonesia) Europe to Ukraine U.S.A. Canada, Mexico, U.S.A.	[New Zealand] New Zealand Java (Indonesia)	Madagascar Madagascar Madagascar	Madagascar Madagascar Madagascar
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Tanzanian Woolly Bat Sucker-footed Bat	Javan Thick-thumbed Bat Hawaiian Hoary Bat Bartel's Myotis Long-fingered Bat Pond Bat Grey Bat Herman's Myotis Mouse-eared Bat Indiana Bat Townsend's Big-eared Bat	New Zealand Lesser Short-tailed Bat New Zealand Greater Short-tailed Bat Javan Mastiff Bat	Hairy-eared Dwarf Lemur Coquerel's Dwarf Lemur Fork-marked Dwarf Lemur	Grey-backed Sportive Lemur Milne-Edwards' Sportive Lemur White-footed Sportive Lemur

Myotis myotis Myotis sodalis

Plecotus townsendii

Family Molossidae

Mystacina tuberculata

Otomops formosus

Mystacina robusta

Family Megaladapidae

Lepilemur edwardsi

Lepilemur dorsalis

Lepilemur leucopus

Family Cheirogaleidae

Allocebus trichotis

Mirza coquereli Phaner furcifer

Order PRIMATES

R Madagascar R Madagascar R Madagascar V Madagascar	E Madagascar K Madagascar V Madagascar E Madagascar C Madagascar E Madagascar	
Microdon Sportive Lemur Weasel Sportive Lemur Red-tailed Sportive Lemur Northern Sportive Lemur	Golden Bamboo Lemur Alaotran Gentle Lemur Grey Gentle Lemur Western Gentle Lemur Greater Bamboo Gentle Lemur Ring-tailed Lemur Crowned Lemur White-collared Lemur White-collared Lemur Brown Lemur Brown Lemur Brown Lemur Brown Lemur Red-fronted Lemur Red-fronted Lemur Red-bellied Lemur Red-bellied Lemur Red-bellied Lemur Roolly Lemur Ruffed Lemur Ruffed Lemur Ruffed Lemur Ruffed Lemur Ruffed Sifaka Golden Crowned Sifaka	
Lepilemur microdon Lepilemur mustelinus Lepilemur ruficaudatus Lepilemur septentrionalis	Family Lemuridae Hapalemur aureus Hapalemur aureus Hapalemur griseus alaotrensis Hapalemur griseus griseus Hapalemur griseus griseus Hapalemur griseus occidentalis Hapalemur simus Lemur coronatus Lemur fulvus albofolaris Lemur fulvus albofolaris Lemur fulvus albofolaris Lemur fulvus sanfordiris Lemur fulvus rufus Lemur fulvus rufus Lemur fulvus rufus Lemur fulvus rufus Lemur fulvus angordi Lemur macaco Lemur macaco Lemur macaco Temur macaco Te	

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Aye-aye	Angwantibo Thomas's Bushbaby Zanzibar Bushbaby Pygmy Loris	Lesser Spectral Tarsier Philippine Tarsier	Brown Howler Monkey Guatemalan Black Howler Monkey	Long-naured Spider Monkey Brown-headed Spider Monkey	Geoffroy's Spider Monkey Black Spider Monkey	Woolly Spider Monkey Red and White Hakari	Black-headed Uakari	Masked Titi White-nosed Saki	Southern Bearded Saki	Woolly Monkey Central American Squirrel Monkey
Family Daubentoniidae Daubentonia madagascariensis	Family Lorisidae Arctocebus calabarensis Galago thomasi Galago zanzibaricus Nycticebus pygmaeus	Family Tarsiidae Tarsius pumilus Tarsius syrichta	Family Cebidae Alouatta fusca Alouatta villosa	Ateles belzebuth Ateles fusciceps	Ateles geoffroyi	Brachyteles arachnoides	Cacajao melanocephalus	Callicebus personatus Chiropotes albinasus	Chiropotes satanas satanas	Lagonrix Javicauda Lagothrix lagotricha Saimiri oerstedi

Family Callitrichidae Callimico goeldii Callithrix argentata leucippe	Callithrix aurita Callithrix flaviceps	Callithrix humeralifer intermedius Leontonithecus caissara	Leontopithecus chrysomelas Leontopithecus chrysopygus	Leontopithecus rosalia Saguinus bicolor	Saguinus imperator Saguinus leucopus	Saguinus oedipus oedipus
Family Callimico g Callithrix	Callithrix Callithrix)	Callithrix I	Leontopithe Leontopithe	Leontopithe Saguinus l	Saguinus i Saguinus l	Saguinus c

Family Cercopithecidae	Allenopithecus nigroviridis Cercocebus aterrimus	Cercocebus galeritus galeritus	Cercocebus galeritus sanje	Cercocebus torquatus	Cercopithecus diana	Cercopithecus erythrogaster	Cercopithecus erythrotis	Cercopithecus erythrotis sclateri	Cercopithecus hamlyni
Family Cer	Allenopithecus r Cercocebus ater	Cercocebus gale	Cercocebus gale	Cercocebus torqu	Cercopithecus d	Cercopithecus er	Cercopithecus er	Cercopithecus er	Correntithorne h

Cercopithecus salongo Cercopithecus preussi

Cercopithecus Ihoesti

Cercopithecus solatus

Angola, Congo, Zaire	N. Angola, C. Zaire	Kenya	Tanzania	West Africa	West Africa	Benin, Nigeria	Cameroon, Bioko, Nigeria	Nigeria	Rwanda, Uganda, Zaire	Burundi, Rwanda, Uganda, Zaire	Cameroon, Bioko, Nigeria	Zaire	Gabon
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Allen's Swamp Monkey	Black Mangabey	Tana River Mangabey	Sanje Crested Mangabey	Collared Mangabey	Diana Monkey	White-throated Guenon	Russet-eared Guenon	White-throated Guenon	Owl-faced Guenon	L'Hoest's Guenon	Preuss's Guenon	Salongo Guenon	Sun-tailed Guenon

Bolivia, Brazil, Peru

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Golden-headed Lion Tamarin

Golden Lion Tamarin

Black Lion Tamarin

Black-faced Lion Tamarin

Santarem Marmoset Santarem Marmoset

Colombia Colombia

White-footed Tamarin

Emperor Tamarin

Pied Tamarin

Cottontop Tamarin

South America

Brazil Brazil Brazil Brazil Brazil Brazil Brazil Brazil Brazil

Buffy-tufted-ear Marmoset

Goeldi's Marmoset

White Marmoset

Buffy-headed Marmoset

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olobus s s s s s s s s s s s s s s s s s s	Senegal
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Mentawai Macaque Lion-tailed Macaque Barbary Macaque Tibetan Macaque Proboscis Monkey Javan Leaf Monkey	Mentawai Leaf Monkey Red-shanked Douc Langur Black-shanked Douc Monkey Tonkin Snub-nosed Monkey Yunnan Snub-nosed Monkey	Sichuan Golden Snub-nosed Monkey Pig-tailed Langur Tonkin Leaf Monkey Golden Leaf Monkey Nilgiri Leaf Monkey White-headed Black Leaf Monkey	Black Gibbon Hoolock Gibbon Kloss's Gibbon Javan Gibbon Pileated Gibbon Orang-utan	Gorilla Mountain Gorilla Eastern Lowland Gorilla Pygmy Chimpanzee

Rhinopithecus roxellanae

Simias concolor

Rhinopithecus brelichi

Rhinopithecus bieti

Trachypithecus francoisi

Pygathrix nigripes Rhinopithecus avunculus

Presbytis potenziani

Macaca thibetana

Nasalis larvatus Presbytis comata

Macaca sylvanus

Macaca silenus

Macaca pagensis

Pygathrix nemaeus

Trachypithecus leucocephalus

Trachypithecus geei Trachypithecus johnii Family Hylobatidae

Hylobates concolor

Hylobates hoolock

Gorilla gorilla berengei

Gorilla gorilla

Gorilla gorilla graueri

Pan paniscus

Family Pongidae

Hylobates pileatus

Pongo pygmaeus

Hylobates moloch

Hylobates klossi

V Equatorial Africa E West Africa	V Central & South America	E Brazil	K Argentina, Bolivia, Paraguay K Argentina V South America I Brazil	V China R China Ex [Sardinia, Corsica]	E South Africa E Himalayan foothills E Mexico I Sumatra (Indonesia) E Ryukyu Is (Japan) E Mexico E Tres Marias Is (Mexico) Ex [Mexico] E U.S.A.
Chimpanzee West African Chimpanzee	Giant Anteater	Maned Sloth	Burmeister's Armadillo Pink Fairy Armadillo Giant Armadillo Brazilian Three-banded Armadillo	Kozlov's Pika Sardinian Pika	Riverine Rabbit Hispid Hare Tehuantepec Hare Sumatran Short-eared Rabbit Amami Rabbit Volcano Rabbit Tres Marias Cottontail Omilteme Cottontail Lower Keys Rabbit
Pan troglodytes Pan troglodytes verus	Order EDENTATA Family Myrmecophagidae Myrmecophaga tridactyla	Family Bradypodidae Bradypus torquatus	Family Dasypodidae Chlamyphorus retusus Chlamyphorus truncatus Priodontes giganteus Tolypeutes tricinctus	Order LAGOMORPHA Family Ochotonidae Ochotona koslowi Ochotona muliensis Prolagus sardus	Family Leporidae Bunolagus monticularis Caprolagus hispidus Lepus flavigularis Nesolagus netscheri Pentalagus furnessi Romerolagus diazi Sylvilagus graysoni Sylvilagus insonus Sylvilagus palustris hefneri

Order RODENTIA Family Aplodontidae Aplodontia rufa nigra Aplodontia rufa phæa
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Family Sciuridae

Tamiasciurus hudsonicus grahamensis Eutamias quadrivittatus australis Glaucomys volans guerreroensis Eutamias minimus atristriatus Glaucomys sabrinus coloratus Glaucomys volans oaxacensis Glaucomys volans goldmani Glaucomys sabrinus fuscus Ratufa indica elphinstonei Marmota vancouverensis Syntheosciurus brochus Ratufa indica dealbata Sciurus niger cinereus Cynomys mexicanus Marmota menzbieri Cynomys parvidens

Family Geomyidae

Thomomys umbrinus emotus Zygogeomys trichopus

Family Heteromyidae

Dipodomys elator Dipodomys gravipes Dipodomys heermanni morroensis

Mexican Prairie Dog Utah Prairie Dog Least Chipmunk Colorado Chipmunk Carolina Northern Flying Squirrel Virginia Northern Flying Squirrel E U.S. Wexican Flying Squirrel R Mexi	Mexico U.S.A. New Mexico (U.S.A.) New Mexico (U.S.A.) U.S.A.
E] ying Squirrel E ying Squirrel E rel R	exico .S.A. ew Mexico (U.S.A.) ew Mexico (U.S.A.) .S.A.
V E E E E E E E E E E E E E E E E E E E	.S.A. ew Mexico (U.S.A.) ew Mexico (U.S.A.) .S.A.
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E Squirrel E E R	ew Mexico (U.S.A.) S.A.
g Squirrel E Squirrel E R R R	S.A.
Squirrel E R B R	
et et	U.S.A.
13	Mexico
	Mexico
R Mexi	Mexico
Menzbier's Marmot V Kaza	Kazakhstan, Uzbekistan (U.S.S.R
armot E	Vancouver I. (Canada)
Dangs Giant Squirrel E India	dia
Maharasthra Giant Squirrel E India	dia
Delmarva Fox Squirrel E U.S.	U.S.A.
X	Costa Rica, Panama
Mount Graham Red Squirrel E Arizo	Arizona (U.S.A.)

Michoacan Pocket Gopher Texas Kangaroo Rat San Quintin Kangaroo Rat Morro Bay Kangaroo Rat

Mexico	Texas (U.S.A.) Baja California (Mexico) California (U.S.A.)
-	足田田

New Mexico (U.S.A.)

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Southern Pocket Gopher

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Dipodomys ingens
Dipodomys microps leucotis
Dipodomys nitratoides exilis
Dipodomys nitratoides nitratoides
Dipodomys stephensi
Perognathus alticola
Perognathus inornatus psammophilus
Perognathus longimembris brevinasus

Family Castoridae

Castor canadensis frondator Castor canadensis mexicanus Castor fiber bindai

Family Cricetidae

Neotoma anthonyi
Neotoma bunkeri
Neotoma floridana smalli
Neotoma fuscipes riparia
Neotoma martinensis
Oryzomys argentatus
Oryzomys nelsoni
Peromyscus gossypinus allapaticola

Peromyscus pembertoni
Peromyscus pembertoni
Peromyscus polionotus allophrys
Peromyscus polionotus niveiventris
Peromyscus polionotus phasma
Peromyscus polionotus trissyllepsis
Reithrodontomys megalotis limicola
Reithrodontomys raviventris
Sigmodon arizonae plenus

A A

Giant Kangaroo Rat	Н	California (U.S.)
Houserock Chisel-toothed Kangaroo Rat	X	Arizona (U.S.A.)
Fresno Kangaroo Rat	臼	California (U.S.,
Tipton Kangaroo Rat	闰	California (U.S.
Stephens Kangaroo Rat	臼	California (U.S.)
White-eared Pocket Mouse	>	California (U.S.
Salinas Pocket Mouse	闰	California (U.S.
Los Angeles Pocket Mouse	臼	California (U.S.
Broad-tail Beaver	田	Mexico
Rio Grande Beaver	四	Mexico
	闰	Mongolia
Anthony's Wood Rat	ы	Mexico
Bunker's Wood Rat	臼	Mexico
Key Largo Wood Rat	臼	U.S.A.
San Joaquin Valley Wood Rat	^	California (U.S.
San Martin Island Wood Rat	回	Mexico
Silver Rice Rat	H	Florida (U.S.A.)
Nelson's Rice Rat	Ex?	Mexico
Key Largo Cotton Mouse	囶	U.S.A.
Pemberton's Deer Mouse	EX	[Mexico]
Choctawhatchee Beach Mouse	囶	U.S.A.
Alabama Beach Mouse	臼	U.S.A.
Southeastern Beach Mouse	—	U.S.A.
Anastasia Island Beach Mouse	臼	U.S.A.
Perdido Key Beach Mouse	臼	U.S.A.
Southern Marsh Harvest Mouse	>	California (U.S.)
Salt-marsh Harvest Mouse	臼	California (U.S.)
Colorado River Cotton Rat	ខា	California (U.S.

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Microtus pennsylvanicus chihuahuensis Microtus pennsylvanicus dukecampbelli Microtus mexicanus hualpaiensis Microtus californicus scirpensis Microtus mexicanus navaho Pitymys bavaricus Microtus breweri

Family Muridae

Macruromys elegans eporillus conditor Leporillus apicalis Conilurus albipes

Pseudomys shortridgei Pseudomys oralis

Hualapai Mexican Vole Amargosa Vole Beach Vole

Bavarian Pine Vole

Philippines

Australia Australia

Australia

Australia Australia Australia XXX

Australia Australia

Short-tailed Hopping-mouse

Lesser Small-toothed Rat

Greater Stick-nest Rat

lesser Stick-nest Rat

White-toothed Melomys

akeland Downs Mouse

Rabbit-eared Tree-rat

Luzon Forest Rat

Northern Hopping-mouse

Dusky Hopping-mouse

Australia Australia B S

Australia Australia EX

Darling Downs Hopping-mouse

Alice Springs Mouse

Jong-tailed Hopping-mouse Big-eared Hopping-mouse Australia Australia

Australia

Australia

Australia Australia

Hastings River Mouse

Western Mouse

Gould's Mouse Smoky Mouse

Shark Bay Mouse

Heath Rat

Pilliga Mouse

Australia Australia

California (U.S.A.) Arizona (U.S.A.) Arizona (U.S.A.)

民田田王

Florida (U.S.A.)

F.R.G.

Mexico

田田

Florida Saltmarsh Vole

Mexican Vole

R Australia E Australia E Ryukyu Is (Japan) R Australia R Australia E Australia	E New Mexico (U.S.A.) I California (U.S.A.)	I Brazil	E Brazil, Peru, Ecuador, Venezuela	I Andes I Chile	E Cuba I Jamaica E Cuba I Cuba I Cuba I Cuba E Cuba E Cuba E Cuba E Cuba
Giluwe Rat Poncelet's Giant Rat Ryukyu Spiny Rat Rock-dwelling Rat False Water-rat Central Rock-rat	Meadow Jumping Mouse Point Reyes Jumping Mouse	Thin-spined Porcupine		Short-tailed Chinchilla Long-tailed Chinchilla	Cabrera's Hutia Large-eared Hutia Jamaican Hutia Garrido's Hutia Chapman's Prehensile-tailed Hutia Bushy-tailed Hutia Isla de la Juventud Tree Hutia Dwarf Hutia Little Earth Hutia
Rattus giluwensis Solomys ponceleti Tokudaia osimensis muenninki Xenuromys barbatus Xeromys myoides Zyzomys pedunculatus	Family Zapodidae Zapus hudsonicus luteus Zapus trinotatus orarius	Family Erithizontidae Chaetomys subspinosus	Family Dinomyidae Dinomys branickii	Family Chinchillidae Chinchilla brevicaudata Chinchilla lanigera	Family Capromyidae Capromys angelcabrerai Capromys auritus Capromys brownii Capromys garridoi Capromys melanurus Capromys meridonalis Capromys nanus Capromys sanfelipensis Geocapromys brownii

R Bahamas R Hispaniola	V Argentina	V South America	E Yangtze R. (China) V India, Bangladesh, Nepal, Bhutan E Pakistan K Argentina, Brazil, Uruguay	K Coastal South Atlantic K Coastal Chile K Coastal South Africa & Namibia V Coastal New Zealand K Rivers & coasts from Bay of Bengal to	K Coastal waters of N. Hemisphere E Gulf of California (Mexico)	K Arctic & sub-Arctic Ocean K Arctic Ocean	V North Atlantic
Bahamian Hutia Hispaniolan Hutia	Red Vizcacha Rat	Boto, Amazon River Dolphin	Bajji, Yangtze River Dolphin Ganges River Dolphin Indus River Dolphin Franciscana, La Plata Dolphin	Commerson's Dolphin Black Dolphin Heaviside's Dolphin Hector's Dolphin Irrawaddy Dolphin	Harbour Porpoise Vaquita	White Whale Narwhal	Northern Bottlenose Whale
Geocapromys ingrahami Plagiodontia aedium	Family Octodontidae Tympanoctomys barrerae	Order CETACEA Family Iniidae Inia geoffrensis	Family Platanistidae Lipotes vexillifer Platanista gangetica Platanista minor Pontoporia blainvillei	Family Delphinidae Cephalorhynchus commersonii Cephalorhynchus eutropia Cephalorhynchus heavisidii Cephalorhynchus hectori Orcaella brevirostris	Phocoena phocoena Phocoena sinus	Family Monodontidae Delphinapterus leucas Monodon monoceros	Family Ziphiidae Hyperoodon ampullatus

Family Balaenopteridae Balaenoptera musculus Balaenoptera physalus

Megaptera novaeangliae

Family Balaenidae

Eubalaena australis Balaena mysticetus

Eubalaena glacialis

Order CARNIVORA Family Canidae

Canis simensis Canis lupus Canis rufus

Chrysocyon brachyurus

Dusicyon australis Cuon alpinus

Dusicyon griseus

Dusicyon (Atelocynus) microtis Dusicyon sechurae

Dusicyon vetulus

Speothos venaticus Fennecus zerda Lycaon pictus

Vulpes bengalensis Urocyon littoralis

Humpback Whale Blue Whale Fin Whale

Southern Right Whale Bowhead Whale

Northern Right Whale

All Oceans 田>>

All Oceans All Oceans

Arctic, N. Atlantic & N. Pacific Oceans S.Atlantic, Pacific, Indian & Southern

N. Atlantic & N. Pacific Oceans

North America, Middle East, Eurasia

South America Ethiopia

Asia

Falkland Is]

Falkland Island Wolf

Dhole

Simien Jackal Maned Wolf

Grey Wolf Red Wolf Small-eared Zorro

Grey Zorro

Sechuran Zorro

Hoary Zorro

Fennec Fox

African Wild Dog

sland Grey Fox

Bush Dog

Blanford's Fox

Bengal Fox

Argentina, Chile, Ecuador

South America

Ecuador, Peru

Brazil

North Africa

Subsaharan Africa South America

California (U.S.A.)

ndia, Pakistan, S. Nepal

J.S.S.R., Afghanistan, Iran, Pakistan

neuca us s ni edrosianus onidae	bear rizzly Bear a Bear	
dae us telmalestes ngicaudis	wed Otter osed Skunk ter tter oated Marten	

Martes melampus tsuensis
Melogale everetti
Melogale orientalis
Mustela lutreola
Mustela lutreolina
Mustela nigripes
Pteronura brasiliensis
Vormela peregusna

Family Viverridae

Arctogalidia trivirgata trilineata Bdeogale crassicauda omnivora Macrogalidia musschenbroekii Poiana richardsoni liberiensis Mungotictis decemlineata Galidictis grandidiensis Genetta genetta isabelae Paradoxurus lignicolor Daradoxurus jerdoni Genetta abyssinica Chrotogale owstoni Inyptoprocta ferox Galidictis fasciata Bdeogale jacksoni Synogale bennettii Eupleres goudotii Salanoia concolor Genetta johnstoni Liberiictis kuhni Fossa fossana

Viverra civettina

I Japan K Sabah (Malaysia) K Java (Indonesia)	V Europe K Java, S.Sumatra (Indonesia)		V South America V C. Europe to Greece & Turke	I Java (Indonesia)	E N. Coastal Tanzania, Kenya	K Kenya, Uganda	K Indochina	K Madagascar		V Madagascar	V Madagascar				R Spain	K Liberia, Guinea	E Liberia, Cote d'Ivoire, Guinea		V Madagascar	I S. India	E Sumatra (Indonesia)	I Liberia, Cote d'Ivoire, Sierra I	
Tsushima Island Marten Kinabalu Ferret-badger Javan Ferret-badger	European Mink Indonesian Mountain Weasel	Black-footed Ferret	Giant Otter European Marbled Polecat	Javan Small-toothed Palm Civet	Sokoke Bushy-tailed Mongoose	Jackson's Mongoose	Owston's Palm Civet	Fossa	Otter Civet	Falanouc	Malagasy Civet	Malagasy Broad-striped Mongoose	Giant-striped Mongoose	Abyssinian Genet	Ibiza Common Genet	Johnston's Genet	Liberian Mongoose	Sulawesi Palm Civet	Malagasy Narrow-striped Mongoose	Jerdon's Palm Civet	Mentawai Palm Civet	Leighton's Linsang	T

Leone

Family Hyaenidae	Hyaena brunnea	Hyaena hyaena barbara
Far	Hyaena	Hvaena

Acinonyx jubatus venaticus Felis caracal michaelis Felis concolor cougar Family Felidae Felis concolor coryi Felis iriomotensis Acinonyx jubatus Felis jacobita Felis badia

Felis margarita scheffeli Felis marmorata Felis pardalis Felis pardina

Felis rubiginosa Felis temmincki Felis planiceps

Felis tigrina Felis wiedii

Felis yagouarundi Neofelis nebulosa

Panthera leo persica

Panthera pardus Panthera tigris Panthera onca

Panthera uncia

Barbary Hyaena Brown Hyaena

Turkmenian Caracal Lynx Bornean Bay Cat Asiatic Cheetah

Cheetah

Eastern Cougar Plorida Cougar

riomote Cat Andean Cat

Pakistan Sand Cat Marbled Cat

Flat-headed Cat Pardel Lynx Ocelot

Asiatic Golden Cat Rusty-spotted Cat

Little Spotted Cat

Clouded Leopard Jaguarundi Margay

Asiatic Lion Jaguar

Leopard

Snow Leopard

Algeria, Morocco, Tunisia Southern Africa > E

Africa, Middle East, Iran, [India] [ran, [India]

U.S.S.R. Borneo

U.S.A.

Canada, U.S.A.

Ryukyu Is (Japan)

Pakistan Andes

Asia

U.S.A., Central & South America Portugal, Spain

India, Sri Lanka South-east Asia

Central & South America Asia

Central & South America

U.S.A., Central & South America

U.S.A., Central & South America Gujarat (India)

Africa, Middle East, Asia Asia

Asia

Order PINNIPEDIA Family Otariidae

Arctocephalus philippii
Arctocephalus townsendi
Odobenus rosmarus laptevi
Zalophus californianus japonicus

Family Phocidae

Monachus monachus Monachus schauinslandi Monachus tropicalis Phoca hispida saimensis Phoca vitulina stejnegeri

Order PROBOSCIDEA Family Elephantidae

Elephas maximus Loxodonta africana

Order HYRACOIDEA

Family Procviidae Dendrohyrax validus

Order SIRENIA Family Dugongidae Dugong dugon

Hydrodamalis gigas

Family Trichechidae Trichechus inunguis Trichechus manatus

Juan Fernandez Fur Seal Guadalupe Fur Seal Laptev Walrus Japanese Sea Lion Mediterranean Monk Seal Hawaiian Monk Seal Caribbean Monk Seal Saimaa Seal Kurii Seal

Indian Elephant African Elephant Eastern Tree Dassie

Dugong

Steller's Sea Cow Amazonian Manatee West Indian Manatee

V Chile V Mexico, U.S.A.

U.S.S.R.

Ex? Japan, North & South Korea

E Mediterranean & Mauritanian coasts E Hawaii (U.S.A.)

Ex? Caribbean E Finland

V Kuril Sea

E Asia V Africa K Tanzania, Pemba I., Zanzibar

V Coastal Indian & Western Pacific Oceans

Ex [Bering Sea, North Pacific Ocean]

V Amazon Basin
V Caribbean & South American Coasts
& Rivers

V West Africa	E North-east Africa E Ethiopia, Kenya, [Somalia] V Asia Ex [Syria] E Pakistan, India Ex? Mongolia, China Ex? Mongolia, China Ex [South Africa] V Angola, Namibia E South Africa	V Central & North-west South Ameri E South-east Asia V North-west South America	E Zaire, S. Sudan E Africa E South-east Asia E Java (Indonesia), Vietnam E India, Nepal	V Sulawesi, Buru, Sulu & Togian Is (Indonesia) V Visayan Is (Philippines) V Malaysia, Indonesia E [Bangladesh], India, Nepal
West African Manatee	African Wild Ass Grevy's Zebra Asiatic Wild Ass Syrian Wild Ass Indian Wild Ass Przewalski's Horse True Quagga Hartmann's Mountain Zebra Cape Mountain Zebra	Central American Tapir Malayan Tapir Mountain Tapir	Northern Square-lipped Rhinoceros Black Rhinoceros Sumatran Rhinoceros Javan Rhinoceros Great Indian Rhinoceros	Babirusa Visayan Warty Pig Western Bearded Pig Pygmy Hog
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Family Tapiridae

Family Rhinocerotidae Ceratotherium simum cottoni

Tapirus pinchaque

Tapirus indicus

Tapirus bairdii

Didermocerus sumatrensis

Diceros bicornis

Rhinoceros sondaicus

Rhinoceros unicornis

Order ARTIODACTYLA

Sus barbatus cebifrons

Sus barbatus oi

Sus salvanius

Family Suidae Babyrousa babyrussa

Order PERISSODACTYI

Family Equidae

Equus africanus

Equus grevyi

Trichechus senegalensis

Equus hemionus hemippus

Equus hemionus

Equus hemionus khur

Equus przewalskii

Equus zebra hartmannae

Equus zebra zebra

Equus quagga quagga

Corsica (France)], Sardinia (Italy) Java & Bawean I. (Indonesia) Argentina, Bolivia, Paraguay Calamian I. (Philippines) /isayan Is (Philippines) Sawean I. (Indonesia) Afghanistan, U.S.S.R. Ryukyu Is (Japan) Ryukyu Is (Japan) Central America Mongolia, China Algeria, Tunisia South-east Asia South-east Asia China, Bhutan india, Nepal West Africa China China China Andes China India India > > Javan and Bawean Warty Pigs Manipur Brow-antlered Deer Thailand Brow-antlered Deer Ryukyu Islands' Wild Pig Pygmy Hippopotamus Visayan Spotted Deer Wild Bactrian Camel Corsican Red Deer Chacoan Peccary Mc'Neill's Deer Thorold's Deer Calamian Deer Bactrian Deer Yarkand Deer Barbary Deer Swamp Deer Ryukyu Sika Kuhl's Deer Marsh Deer Shansi Sika **Thamin** Hangul Vicuna Shou Family Hippopotamidae Cervus elaphus yarkandensis Family Tayassuidae Cervus elaphus bactrianus Cervus elaphus corsicanus Cervus nippon grassianus Cervus elaphus macneilli Cervus elaphus barbarus Cervus elaphus wallichi Family Camelidae Blastocerus dichotomus Cervus elaphus hanglu Cervus nippon keramae Sus scrofa riukiuanus Family Cervidae Cervus eldi siamensis Choeropsis liberiensis Camelus bactrianus Catagonus wagneri Axis calamianensis Cervus albirostris Cervus duvauceli Vicugna vicugna Cervus eldi eldi Sus verrucosus Cervus alfredi Cervus eldi Axis kuhli

Ex China I China I China E Taiwan E Iran, Iraq, Israel, Syria E China V North Andes E South Andes China, Korea V China E Burma, Thailand, China R Mexico R U.S.A. E Argentina I Andes	E Mexico & U.S.A. V Poland, U.S.S.R. V South-east Asia E Central Asia V South-east Asia E India, Nepal E India, Nepal E Sulawesi (Indonesia) E West Africa E West Africa E Sahara/Sahel E Sahara/Sahel E Angola, Namibia
North China Sika South China Sika Formosan Sika Persian Fallow Deer Pere David's Deer North Andean Huemul South Andean Huemul Chinese Water-deer Black Muntjac Fea's Muntjac Cedros Island Mule Deer Key Deer Argentinian Pampas Deer Northern Pudu	Lower California Pronghorn Sonoran Pronghorn European Bison Gaur Wild Yak Banteng Kouprey Wild Asiatic Water Buffalo Lowland Anoa Mountain Anoa Tamaraw Western Giant Eland Addax Black-faced Impala
Cervus nippon mandarinus Cervus nippon pseudaxis Cervus nippon sichvanicus Cervus nippon taiouanus Dama mesopotamica Elaphurus davidianus Hippocamelus antisensis Hippocamelus bisculcus Hydropotes inermis Muntiacus crinifrons Muntiacus feaei Odocoileus hemionus cerrosensis Odocoileus virginianus clavium Ozotoceros bezoarticus celer Pudu mephistopheles	Family Antilocapridae Antilocapra americana peninsularis Antilocapra americana sonoriensis Antilocapra americana sonoriensis Family Bovidae Bison bonasus Bos gaurus Bos gaurus Bos jawanicus Bos jawanicus Bos jawanicus Bos jawanicus Bos yauneli Bubalus depressicornis Bubalus quarlesi Bubalus mindorensis Taurotragus derbianus derbianus Addax nasomaculatus Aepyceros melampus petersi

Cote d'Ivoire, Liberia, Sierra Leone Cote d'Ivoire, Liberia, Sierra Leone Sahara/Sahel & Middle East Kenya, Tanzania, Zanzibar Djibouti, Ethiopia, Somalia Egypt, Ethiopia, Sudan Nest & Central Africa North-eastern Africa Arabia, Middle East Senegal to Eritrea North-west Africa Sthiopia, Somalia Ethiopia, Somalia Ethiopia, Somalia Southern Africa Kenya, Somalia South Africa] Sahara/Sahel Sahara/Sahel South Africa South Africa West Africa Tanzania Nigeria Jganda Angola Arabia Gabon Ruwenzori Black-fronted Duiker Slender-horned Gazelle Soemmerrings Gazelle Arabian Sand Gazelle Giant Sable Antelope Swayne's Hartebeest Western Klipspringer Red-fronted Gazelle White-legged Duiker Hunter's Antelope Mountain Gazelle Jentink's Duiker Speke's Gazelle Cuvier's Gazelle Tora Hartebeest Abbott's Duiker Ogilby's Duiker Beira Antelope Dorcas Gazelle Dama Gazelle Ader's Duiker Zebra Duiker Bontebok Korrigum Bontebok 3luebuck Dibatag Lechwe

Oreotragus oreotragus porteousi

Dorcatragus megalotis

Gazella cuvieri

Gazella subgutturosa marica

Gazella soemmerringi

Gazella spekei

Gazella leptoceros Gazella rufifrons

Gazella gazella

Gazella dorcas

Gazella dama

Hippotragus leucophaeus Hippotragus niger variani

Kobus leche

Damaliscus lunatus korrigum

Damaliscus dorcas dorcas

Cephalophus zebra Damaliscus dorcas Damaliscus hunteri

Cephalophus nigrifrons rubidus

Cephalophus jentinki

Cephalophus ogilbyi crusalbum

Cephalophus spadix

Cephalophus ogilbyi

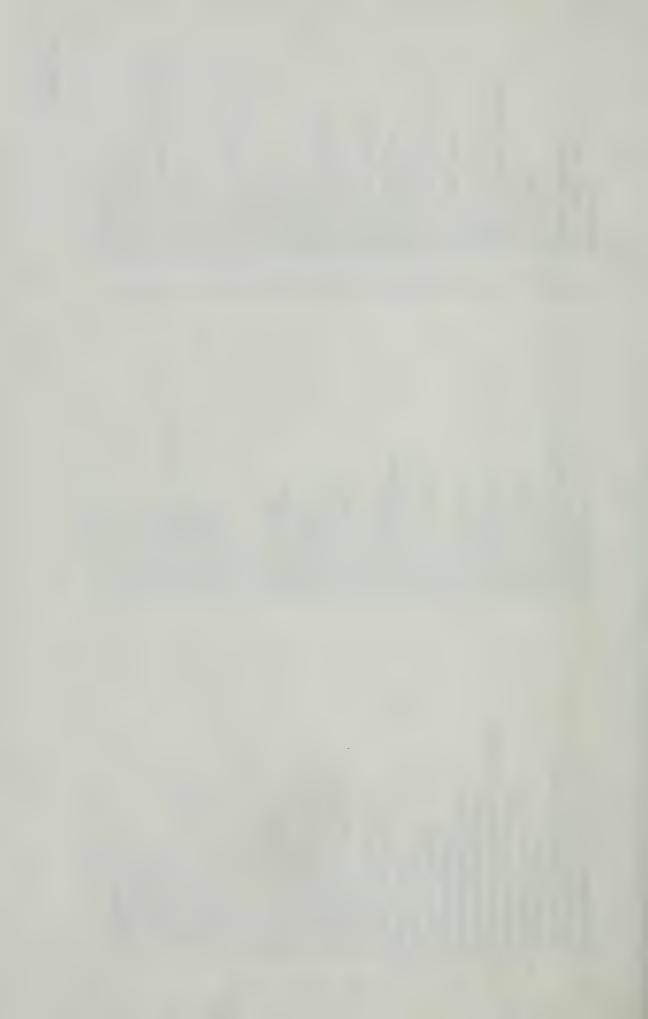
Alcelaphus buselaphus swaynei

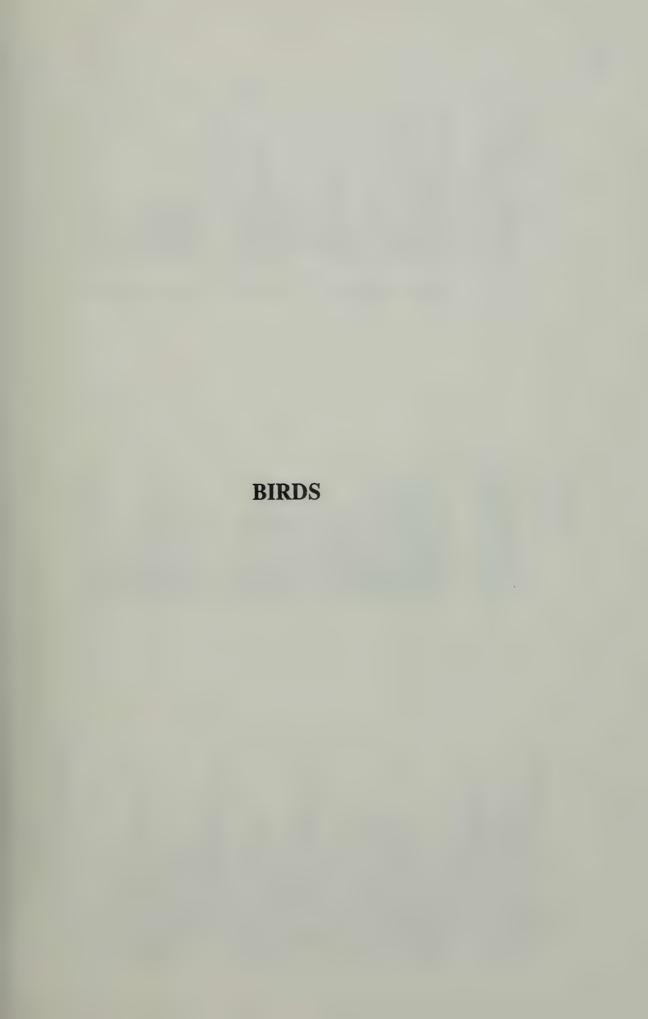
Alcelaphus buselaphus tora

Ammodorcas clarkei

Cephalophus adersi

E Sahara/Sahel	E Arabia, Middle East	E Cameroon, Nigeria	E Ethiopia	V Central Africa	V Taiwan	E Malaysia, Sumatra (Indonesia)	R China	I China	V China, Burma, India	V India	E Oman	V West Himalayas	E Afghanistan, Pakistan	E Spain	E Ethiopia	V Italy	E France	R Czechoslovakia, Poland	V Sahara/Sahel	V Sardinia, Corsica	V Cyprus
Scimitar-horned Oryx	Arabian Oryx	Western Mountain Reedbuck	Mountain Nyala	Eastern Giant Eland	Formosa Serow	Sumatran Serow	Golden Takin	Szechwan Takin	Red Goral	Nilgiri Tahr	Arabian Tahr	Markhor	Straight-horned Markhor	Pyrenean Ibex	Walia Ibex	Abruzzo Chamois	Chartreuse Chamois	Tatra Chamois	Barbary Sheep	Sardinian Mouflon	Cyprus Mouflon
Oryx dammah	Oryx leucoryx	Redunca fulvorufula adamauae	Tragelaphus buxtoni	Tragelaphus derbianus gigas	Capricornis crispus swinhoei	Capricornis sumatraensis sumatraensis	Budorcas taxicolor bedfordi	Budorcas taxicolor tibetana	Nemorhaedus baileyi	Hemitragus hylocrius	Hemitragus jayakari	Capra falconeri	Capra falconeri megaceros	Capra pyrenaica pyrenaica	Capra walie	Rupicapra pyrenaica ornata	Rupicapra rupicapra cartusiana	Rupicapra rupicapra tatrica	Ammotragus lervia	Ovis orientalis musimon	Ovis orientalis ophion





Class AVES

Order APTERYGIFORMES Family Apterygidae Apteryx owenii

Order TINAMIFORMES Nothoprocta taczanowskii Family Tinamidae Nothoprocta kalinowskii Crypturellus noctivagus Crypturellus saltuarius Tinamus solitarius Tinamus osgoodi

Order SPHENISCIFORMES Family Spheniscidae

Megadyptes antipodes Spheniscus humboldti Spheniscus demersus

Order PODICIPEDIFORMES Family Podicipedidae

Tachybaptus rufolavatus Podiceps taczanowskii Tachybaptus pelzelni Podiceps andinus Podiceps gallardoi Podilymbus gigas

Little Spotted Kiwi

Taczanowski's Tinamou Yellow-legged Tinamou Kalinowski's Tinamou Magdalena Tinamou Solitary Tinamou Lesser Nothura Dwarf Tinamou Black Tinamou

Yellow-eyed Penguin Peruvian Penguin Jackass Penguin

Madagascar Grebe Colombian Grebe Alaotra Grebe Hooded Grebe Atitlan Grebe Junin Grebe

New Zealand

Argentina, Brazil, Paraguay Colombia, Peru Colombia

Brazil Peru Peru

Brazil

Argentina, Brazil

New Zealand

Namibia, South Africa

Chile, Peru

Madagascar Guatemala Madagascar XX XX

Colombia] Argentina Peru

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Taoniscus nanus Nothura minor

Order PROCELLARIIFORMES Family Diomedeidae

Diomedea amsterdamensis Diomedea albatrus

Family Procellariidae

Pterodroma phaeopygia Pterodroma magentae Pterodroma aterrima Pterodroma madeira Pterodroma hasitata Pterodroma cahow Pterodroma becki Pterodroma feae

Pterodroma macgillivrayi Pterodroma defilippiana Procellaria westlandica Procellaria parkinsoni Pterodroma axillaris Puffinus auricularis Pterodroma pycrofti Puffinus creatopus Puffinus heinrothi Pterodroma cookii Puffinus newelli

Family Hydrobatidae

Oceanodroma macrodactyla Oceanodroma markhami Oceanodroma tristrami

Short-tailed Albatross Amsterdam Albatross

Mascarene Black Petrel Dark-rumped Petrel Black-capped Petrel Magenta Petrel Beck's Petrel Gon-gon Cahow Freira

Pink-footed Shearwater Townsend's Shearwater Heinroth's Shearwater Chatham Island Petrel Newell's Shearwater Defilippe's Petrel Westland Petrel Pycroft's Petrel Cook's Petrel Black Petrel Fiji Petrel

Markham's Storm-petrel Guadalupe Storm-petrel Tristram's Storm-petrel

Amsterdam I. (France) 田民

Japan

Mauritius

Papua New Guinea, Solomon Is Bermuda

Cuba, Dominican Rep., Haiti

Cape Verde Is. Madeira (Portugal) Chatham Is (New Zealand) Madeira (Portugal)

Galapagos (Ecuador), Hawaiian Is (U.S.A.)

New Zealand Chile

Chatham Is (New Zealand)

New Zealand

New Zealand

New Zealand

Juan Fernandez Is (Chile)

New Britain (Papua New Guinea)

Hawaiian Is (U.S.A.)

Mexico

Mexico EX

Eastern Pacific Ocean

Hawaiian Is (U.S.A.), Japan

K* Chile, Ecuador, Peru	K* Chile, Peru	E Palaearctic I South & SE Asia	E Christmas I. (Australia)	R New Zealand K* Western Palaearctic R Galapagos (Ecuador)	R Ascension I. (U.K.) E Christmas I. (Australia)	V China, Japan, Taiwan, Indonesia,	E China I Botswana, Namibia, Zambia I China, N. Korea, S. Korea K Comoros, Madagascar E Bangladesh, Burma, India, Nepal
Ringed Storm-petrel	Peruvian Diving Petrel	Dalmatian Pelican Spot-billed Pelican	Abbott's Booby	Rough-faced Shag Pygmy Cormorant Galapagos Flightless Cormorant	Ascension Frigatebird Christmas Frigatebird	Japanese Night-heron	White-eared Night-heron Slaty Egret Chinese Egret Madagascar Heron White-bellied Heron
Oceanodroma hornbyi	Family Pelecanoididae Pelecanoides garnotii	Order PELECANIFORMES Family Pelecanidae Pelecanus crispus Pelecanus philippensis	Family Sulidae Sula abbotti	Family Phalacrocoracidae Phalacrocorax carunculatus Phalacrocorax pygmeus Nannopterum harrisi	Family Fregatidae Fregata aquila Fregata andrewsi	Order CICONIIFORMES Family Ardeidae Gorsachius goisagi	Gorsachius magnificus Egretta vinaceigula Egretta eulophotes Ardea humbloti Ardea imperialis

K* Central and East Africa	V SE Asia R Thailand, Brunei, Indonesia, Malaysia R China, Japan, South Korea, U.S.S.R. V S & SE Asia E India & SE Asia	V Burma, Cambodia, Laos, Thailand, Vietnam, Indonesia E Cambodia, Laos, Thailand, Vietnam E Turkey, North Yemen, Morocco R Lesotho, South Africa, Swaziland E China, Japan I Sao Tome	 E China, N. Korea K* Argentina, Bolivia, Chile, Peru K* Argentina, Bolivia, Chile, Peru 	K* Colombia, Venezuela	R Caribbean Islands
Shoebill	Milky Stork Storm's Stork Oriental White Stork Lesser Adjutant Greater Adjutant	White-shouldered Ibis Giant Ibis Northern Bald Ibis Southern Bald Ibis Crested Ibis Dwarf Olive Ibis	Black-faced Spoonbill Andean Flamingo Puna Flamingo	Northern Screamer	West Indian Whistling Duck
Family Balaenicipitidae Balaeniceps rex	Family Ciconiidae Mycteria cinerea Ciconia stormi Ciconia boyciana Leptoptilos javanicus Leptoptilos dubius	Family Threskiornithidae Pseudibis davisoni Pseudibis gigantea Geronticus eremita Geronticus calvus Nipponia nippon Bostrychia bocagei	Platalea minor Family Phoenicopteridae Phoenicoparrus andinus Phoenicoparrus jamesi	Order ANSERIFORMES Family Anhimidae Chauna chavaria	Family Anatidae Dendrocygna arborea

Bangladesh, Burma, India, Indonesia, U.S.S.R., China, Japan, N. Korea, S. U.S.S.R., China, Japan, N. Korea, S. Irian Jaya (Indonesia), Papua New India, Nepal, Bangladesh, Burmal Argentina, Brazil, Paraguay U.S.S.R., China, N. Korea China, N. Korea, U.S.S.R. Thailand, Laos, Vietnam Hawaiian Is (U.S.A.) Hawaiian Is (U.S.A.) Hawaiian Is (U.S.A.) Western Palaearctic U.S.S.R., S. Korea Korea, Taiwan New Zealand Madagascar Madagascar Palaearctic Palaearctic Palaearctic Palaearctic Australia Guinea U.S.A. Korea Brazil * H **K*** 囟 Lesser White-fronted Goose Scaly-sided Merganser Black Honey Buzzard Madagascar Pochard Brazilian Merganser Red-breasted Goose White-headed Duck White-collared Kite White-winged Duck Pink-headed Duck Crested Shelduck California Condor Madagascar Teal Hawaiian Goose Freckled Duck Mandarin Duck Baer's Pochard Hawaiian Duck Marbled Teal Laysan Duck Brown Teal Baykal Teal Red Kite Order FALCONIFORMES Marmaronetta angustirostris Rhodonessa caryophyllacea Family Cathartidae Family Accipitridae Gymnogyps californianus Henicopernis infuscatus Oxyura leucocephala Branta sandvicensis Mergus octosetaceus Mergus squamatus Stictonetta naevosa Anas aucklandica Cairina scutulata Anas laysanensis Anser erythropus Branta ruficollis Tadorna cristata Leptodon forbesi Anas wyvilliana Aythya innotata Aix galericulata Milvus milvus Anas formosa Anas bernieri Aythya baeri

Solomon Is. Madagascar S & E Asia Palaearctic U.S.S.R., Japan, N. Korea, S. Korea Southern Africa Palaearctic	Andaman Is (India) Indonesia, Malaysia Madagascar Australia Sulawesi (Indonesia) New Britain (Papua New Guinea) Papua New Guinea, Solomon Is	Colombia, Ecuador, Peru, Venezuela Cuba South America Panama, Colombia, Ecuador, Peru Brazil Ecuador	Argentula, prazal, raraguay Central & South America Argentina, Bolivia, Brazil, Paraguay, Uruguay Dominican Rep., Haiti Galapagos (Ecuador) Hawaiian Is (U.S.A.)	Argentina, Chile South and Central America South and Central America Irian Jaya (Indonesia), Papua New Guinea
我因我我我好?	从民团XX民民民	******	* * * > \ \ \	* 4 4 4 >
Solomons Sea Eagle Madagascar Fish-eagle Pallas's Fish-eagle White-tailed Eagle Steller's Sea Eagle Cape Vulture	Dark Serpent-eagle Kinabalu Serpent-eagle Madagascar Serpent-eagle Red Goshawk Small Sparrowhawk New Britain Sparrowhawk Imitator Sparrowhawk	Semi-collared Hawk Gundlach's Hawk Grey-bellied Hawk Plumbeous Hawk White-necked Hawk Grey-backed Hawk	Nanted rawk Solitary Eagle Crowned Eagle Ridgway's Hawk Galapagos Hawk Hawaiian Hawk	Rufous-tailed Hawk Crested Eagle Harpy Eagle New Guinea Eagle

Spilornis kinabaluensis

Accipiter brachyurus

Accipiter imitator

Accipiter collaris

Accipiter radiatus

Accipiter nanus

Eutriorchis astur

Haliaeetus vociferoides Haliaeetus leucoryphus

Haliaeetus sanfordi

Haliaeetus pelagicus

Aegypius monachus

Spilornis elgini

Gyps coprotheres

Haliaeetus albicilla

Harpyhaliaetus coronatus

Harpyhaliaetus solitarius

Leucopternis polionota

Leucopternis occidentalis Leucopternis lacernulata

Leucopternis plumbea

Accipiter poliogaster

Accipiter gundlachi

Harpyopsis novæguineæ

Morphnus guianensis

Harpia harpyja

Buteo galapagoensis

Buteo ridgwayi

Buteo solitarius

Buteo ventralis

Pithecophaga jefferyi Aquila heliaca Aquila adalbertii Spizaetus bartelsi Spizaetus nanus

Family Falconidae

Micrastur plumbeus Micrastur buckleyi Falco naumanni Falco punctatus Falco deiroleucus Falco hypoleucos

Order GALLIFORMES Family Megapodiidae

Megapodius bernsteinii Megapodius nicobariensis Megapodius laperouse Megapodius pritchardii Megapodius wallacei Leipoa ocellata Macrocephalon maleo Aepypodius bruijnii

Family Cracidae

Ortalis erythroptera Penelope barbata Penelope dabbenei Penelope albipennis

Philippine Eagle Imperial Eagle Spanish Imperial Eagle Javan Hawk-eagle Wallaces Hawk-eagle Plumbeous Forest-falcon Traylor's Forest-falcon Lesser Kestrel Mauritius Kestrel Orange-breasted Falcon Grey Falcon

Sula Scrubfowl
Nicobar Scrubfowl
Micronesian Scrubfowl
Polynesian Scrubfowl
Moluccan Scrubfowl
Malleefowl
Malee

Rufous-headed Chachalaca Bearded Guan Red-faced Guan White-winged Guan Cauca Guan

E Philippines
R Palaearctic
E Portugal, Spain
V Java
R Burma, Thailand, Brunei, Indonesia,
Malaysia

K* Brazil, Colombia, Ecuador
K* Ecuador, Peru
R Palaearctic
E Mauritius
K* South and Central America

Australia

V Bariggai & Sula Is (Indonesia)
R Nicobar Is (India)
R Palau, N. Mariana Is (U.S.A.)
V Tonga
R Molluccas (Indonesia)
K* Australia
V Sulawesi (Indonesia)

R Waigeo (Indonesia)

K* Ecuador, Peru

K* Ecuador, Peru

K* Argentina, Bolivia

E Peru E Colombia

Penelope ochrogaster Penelope jacucaca Penelopina nigra Pipile jacutinga

Oreophasis derbianus Pauxi unicornis Crax globulosa Crax alberti Pauxi pauxi Mitu mitu

Crax blumenbachii

Family Phasianidae

Odontophorus hyperythrus Francolinus camerunensis Odontophorus strophium Arborophila cambodiana Francolinus ochropectus Perdicula manipurensis Arborophila rufipectus Arborophila charltonii Francolinus swierstrai Petrao mlokosiewiczi Arborophila gingica Francolinus gularis Dendrortyx barbatus Arborophila ardens Agriocharis ocellata Francolinus nahani Arborophila davidi

Black-fronted Piping Guan Chestnut-bellied Guan White-browed Guan Highland Guan

Northern Helmeted Curassow Southern Helmeted Curassow Blue-billed Curassow Wattled Curassow Alagoas Curassow Horned Guan

Red-billed Curassow

Bearded Wood Partridge Caucasian Black Grouse Jorgeted Wood-quail Chestnut Wood-quail Ocellated Turkey

Mount Cameroon Francolin Swierstra's Francolin Nibouti Francolin

Manipur Bush Quail Nahan's Francolin Sichuan Partridge Swamp Francolin

Chestnut-headed Partridge White-necklaced Partridge Orange-necked Partridge White-eared Partridge

Chestnut-necklaced Partridge

Brazil

Argentina, Brazil, Paraguay Brazil

El Salvador, Guatemala, Honduras, Guatemala, Mexico Mexico, Nicaragua

Colombia, Venezuela Brazil

Bolivia, Peru

Bolivia, Brazil, Colombia, Ecuador, Colombia

Bahia, Espirito Santo (Brazil)

Belize, Guatemala, Mexico Turkey, U.S.S.R., Iran

Colombia Mexico

Colombia Diibouti Cameroon Angola

Bangladesh, India, Nepal Uganda, Zaire

Bangladesh, India

China China

Cambodia, Thailand Vietnam

Phailand, Indonesia, Malaysia

Burma, Thailand, Brunei, Indonesia, Cambodia, Laos, Thailand, Vietnam Kalimantan (Indonesia), Sabah & Shutan, Burma, China, India Sarawak (Malaysia), Brunei Burma, Thailand, Malaysia Laos, Malaysia, Vietnam Hubei, Shanxi (China) India, Nepal, Pakistan Palawan (Philippines) Burma, China, India Sumatra (Indonesia) China, Burma, India ndia, Pakistan laos, Vietnam West Africa Vietnam Malaysia Vietnam Vietnam SE Asia **Taiwan** Taiwan [India] China China China China Zaire China Germain's Peacock-pheasant Malaysian Peacock-pheasant White-breasted Guineafowl Palawan Peacock-pheasant ady Amherst's Pheasant **Brown Eared Pheasant** Salvadori's Pheasant Swinhoe's Pheasant Edwards' Pheasant Western Tragopan **Bulwer's Pheasant** mperial Pheasant Vietnam Pheasant Mikado Pheasant Reeves' Pheasant Cabot's Tragopan Siamese Fireback Hume's Pheasant Slyth's Tragopan Crested Fireback Elliot's Pheasant **Fimalayan Quail** Cheer Pheasant Sclater's Monal Congo Peacock Chinese Monal Crested Argus Green Peafowl

Syrmaticus humiae Syrmaticus ellioti Lophura bulweri Catreus wallichi Lophura diardi

Crossoptilon mantchuricum Chrysolophus amherstiae Polyplectron emphanum Polyplectron malacense Polyplectron germaini Agelastes meleagrides Syrmaticus mikado Rheinardia ocellata Afropavo congensis Syrmaticus reevesii Pavo muticus

Order GRUIFORMES	Family Mesitornithidae	Mesitornis variegata	Mesitornis unicolor	Monias benschi
Ord	Farr	Mesitor	Mesitor	Monias

Family Turnicidae Turnix melanogaster Turnix worcesteri Turnix everetti Turnix olivii Family Pedionomidae Pedionomus torquatus

Family Gruidae Grus nigricollis Grus monacha

Grus japonensis

Grus americana Grus vipio Grus leucogeranus

Bugeranus carunculatus

Family Rallidae Sarothrura ayresi

White-breasted Mesite	R	Mada
Brown Mesite	ద	Mada
Subdesert Monias	出	Mada

Australia Black-breasted Buttonquail **Buff-breasted Buttonquail** Worcester's Buttonquail Sumba Buttonquail

Plains-wanderer

Black-necked Crane Hooded Crane

Japanese Crane

White-naped Crane Whooping Crane

Siberian Crane

Wattled Crane

White-winged Flufftail

Madagascar	Madagascar	Madagascar
K	ద	2

Luzon (Philippines) Sumba (Indonesia)

Australia

Australia **K*** Bhutan, Burma, China, India, Vietnam China, Japan, North Korea, South

China, Japan, North Korea, South Korea, U.S.S.R.

Korea, U.S.S.R. Canada, U.S.A.

China, Japan, North Korea, South Korea, U.S.S.R.

Afghanistan, China, India, Iran,

U.S.S.R., Pakistan

Ethiopia, Central & Southern Africa

Ethiopia, Southern Africa

Papua New Guinea, Solomon Is] J.S.S.R., China, Japan, S. Korea San Cristobal (Solomon Is) Argentina, Bolivia, Chile Lord Howe I. (Australia) New Caledonia (France) Halmahera (Indonesia) naccessible I. (U.K.) Sulawesi (Indonesia) Sulawesi (Indonesia) Argentina, Uruguay Henderson I. (U.K.) Juzon (Philippines) Africa, Palaearctic Argentina, Chile Brazil, Paraguay Gough I. (U.K.) Juam (U.S.A.) Vew Zealand Madagascar Madagascar Jenezuela J Venezuela Colombia SE Asia Japan Cuba Horqueta or Rufous-faced Crake San Cristobal Mountain Rail Henderson Island Rail Slender-billed Flufftail New Caledonian Rail Rusty-flanked Crake Srown-banded Rail Dot-winged Crake Plain-flanked Rail naccessible Rail Gough Moorhen Bar-winged Rail Woodford's Rail ord Howe Rail Masked Finfoot Siberian Crake Bald-faced Rail Sakalava Rail Okinawa Rail nvisible Rail Horned Coot Snoring Rail Austral Rail Sogota Rail Zapata Rail Guam Rail Corncrake Junin Rail [akahe

> Family Heliornithidae Heliopais personata

Pareudiastes silvestris

Sallinula comeri

Fulica cornuta

Cyanolimnas cerverai

Habroptila wallacii

Notornis mantelli

Dryolimnas mirificus

Atlantisia rogersi

Rallus wetmorei

Aramidopsis plateni

Crex crex

Symnocrex rosenbergii

Amaurornis olivieri

Porzana spiloptera

Porzana atra

Rallus semiplumbeus

Rallus antarcticus

Nesoclopeus poecilopterus

Coturnicops exquisitus

Laterallus tuerosi

Sarothrura watersi

Laterallus xenopterus

Laterallus levraudi

Nesoclopeus woodfordi

Gallirallus okinawae

Gallirallus owstoni

Gallirallus lafresnayanus

Gallirallus sylvestris

New Caledonia (France) Paalearctic India Palaearctic India, Cambodia, Nepal, Vietnam India, Nepal, Pakistan India, Nepal, Pakistan India, Nepal, Repain) Chatham Is (New Zealand) New Zealand	<u>я</u> к
田 民民民〉田田 既日 日 1	
Kagu Little Bustard Great Bustard Great Indian Bustard Houbara Bustard Bengal Florican Lesser Florican Canarian Black Oystercatcher Chatham Island Oystercatcher Black Stilt Jerdon's Courser	Javan Wattled Lapwing Sociable Lapwing Piping Plover Madagascar Plover St. Helena Plover Hooded Plover Shore Plover

Family Recurvirostridae

Haematopus chathamensis

Haematopus meadewaldoi

Himantopus novaezelandiae

Family Glareolidae

Rhinoptilus bitorquatus

Family Charadriidae

Vanellus macropterus

Charadrius sanctaehelenae

Charadrius thoracicus

Vanellus gregarius Charadrius melodus Thinornis novaeseelandiae

Charadrius rubricollis

Order CHARADRIIFORME: Family Haematopodidae

Houbaropsis bengalensis

Sypheotides indica

Chlamydotis undulata

Ardeotis nigriceps

Family Rhynochetidae

Rhynochetos jubatus

Family Otididae

Tetrax tetrax Otis tarda

Family Scolopac Numenius borealis Numenius tahitiensis Numenius tenuirostri Tringa guttifer Prosobonia cancellatu Scolopax celebensis Scolopax rochussenii Coenocorypha aucklai Gallinago nemoricola Limnodromus semipa	Family Scolopacidae	Numenius borealis	Numenius taninensis Numenius tenuirostris	Tringa guttifer Prosobonia cancellatus	Scolopax celebensis Scolopax rochussenii	Coenocorypha aucklandica	Gallinago nemoricola	Limnodromus semipalmatus Calidris paramelanotos	T
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Sterna virgata	Sterna albostriata	Sterna balaenarum	Sterna bernsteini
Sterno	Sterno	Sterne	Sterne

Synthliboramphus wumizusume Family Alcidae

Canada, U.S.A. Alaska (U.S.A.), Pacific Ocean	Palaearctic	Tuamotu Archipelago (France)	Sulawesi (Indonesia)	Obi (Indonesia)	New Zealand	S & SE Asia	Asia	Australia	U.S.S.R., S.E. Asia
田丘	* ₩ -	¬ >	Н	_	2	Н	足	X	Н
Eskimo Curlew Bristle-thighed Curlew	Slender-billed Curlew	Nordmann's Greenshank Tuamotu Sandpiper	Sulawesi Woodcock	Obi Woodcock	Sub-antarctic Snipe	Wood Snipe	Asian Dowitcher	Cox's Sandpiper	Spoon-billed Sandpiper

Olrog's Gull	Audouin's Gull	Relict Gull	Saunders' Gull
Olrc	Aud	Reli	Sau
	Olrog's Gull	Olrog's Gull Audouin's Gull	Olrog's Gull Audouin's Gull Relict Gull

China, Mongolia, U.S.S.R. China, Hong Kong, Japan, South

Argentina, Brazil, Uruguay Mediterranean, Morocco

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Red Sea

Prince Edward I. (South Africa), Crozet & Kerguelen Is (France)

Korea, Taiwan

South Africa, Namibia

China

New Zealand

U.S.S.R.
Korea,
က်
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Japan,
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Japanese Murrelet

Order COLUMBIFORMES Family Columbidae

Columba oliviae
Columba trocaz
Columba bollii
Columba junoniae
Columba thomensis
Columba elphinstonii
Columba torringtoni
Columba punicea

Columba argentina Columba pallidiceps Columba caribaea
Nesoenas mayeri
Zenaida graysoni
Columbina cyanopis
Claravis godefrida
Leptotila wellsi
Leptotila conoveri
Geotrygon caniceps
Geotrygon mystacea
Starnoenas cyanocephala
Caloenas nicobarica

Gallicolumba platenae Gallicolumba keayi Gallicolumba menagei Gallicolumba erythroptera

Somali Pigeon
Madeira Laurel Pigeon
Dark-tailed Laurel Pigeon
White-tailed Laurel Pigeon
Maroon Wood-pigeon
Nilgiri Wood-pigeon
Sri Lanka Wood-pigeon
Pale-capped Pigeon

Grey Wood-pigeon Yellow-legged Pigeon Ring-tailed Pigeon
Pink Pigeon
Socorro Dove
Blue-eyed Ground Dove
Grenada Dove
Grenada Dove

Mindoro Bleeding-heart Negros Bleeding-heart Sulu Bleeding-heart Polynesian Ground Dove

R Somalia

R Madeira (Portugal)
R Canary Is (Spain)
R Canary Is (Spain)

Sao Tome

India Sri Lanka R. China, Bangladesh, Burma, India, Thailand

Indonesia, Burong Is (Malaysia)
Bismarck Arch. (Papua New Guinea),
Solomon Is

Jamaica Mauritius

Mexico

K* BrazilV Argentina, Brazil, Paraguay

E Grenada K* Ecuador, Peru I Colombia

E Cuba, Dominican Republic

Grey-headed Quail-dove

Bridled Quail-dove

Blue-headed Quail-dove

Nicobar Pigeon

K Lesser Antilles, Virgin Is.

R Cuba

R S.E. Asia, Indonesia, Papua New

Guinea, Palau (F.S.M.)
I Mindoro (Philippines)
I Negros (Philippines)

I Tawi Tawi (Philippines)

E Society Is. Tuamotu Archip

Society Is, Tuamotu Archipelago (France)

Gallicolumba sanctaecrucis

Gallicolumba salamonis

Gallicolumba rubescens

Gallicolumba hoedtii

Microgoura meeki

Goura cristata

Goura scheepmakeri

Goura victoria

Burma, Thailand, Brunei, Indonesia, Society Is, Tuamotu Arch. (France) Irian Jaya (Indonesia), Papua New Irian Jaya (Indonesia), Papua New Fimor, Roti & Seman (Indonesia) ndonesia, Malaysia, Philippines Guam, N. Mariana Is. (U.S.A.) Wetar & Timor (Indonesia) Marquesas Is (France)] New Caledonia (France) Christmas I. (Australia) Vew Caledonia (France) Choiseul (Solomon Is)] Marquesas Is (France) rian Jaya (Indonesia) Mindoro (Philippines) Irian Jaya (Indonesia) Vanuatu, Solomon Is. Negros (Philippines) Marquesas (France) Sumba (Indonesia) Austral Is (France) Sumba (Indonesia) Western Samoa Obi (Indonesia) Solomon Is. Malaysia Guinea Guinea AX 路 第 第 8 8 2 出出 Polynesian Imperial-pigeon Marquesas Imperial-pigeon Christmas Imperial-pigeon Southern Crowned Pigeon Thick-billed Ground Dove Santa Cruz Ground Dove Western Crowned Pigeon Marquesas Ground Dove Victoria Crowned Pigeon Carunculated Fruit-dove Mindoro Imperial-pigeon Cloven-feathered Dove Marquesas Fruit-dove Giant Imperial-pigeon Red-naped Fruit-dove Grey Imperial-pigeon Sumba Green-pigeon Wetar Ground Dove Timor Green-pigeon Large Green-pigeon Mariana Fruit-dove Tooth-billed Pigeon Negros Fruit-dove Black-winged Lory Rapa Fruit-dove Choiseul Pigeon Order PSITTACIFORMES

Didunculus strigirostris

Treron teysmannii

Treron psittacea

Treron capellei

Drepanoptila holosericea

Ducula mindorensis

Ducula aurorae

Ducula pickeringii

Ducula goliath

Ducula whartoni

Ducula galeata

Family Loriidae

Eos cyanogenia

Ptilinopus granulifrons

Ptilinopus arcanus

Ptilinopus mercierii

Ptilinopus huttoni

Ptilinopus roseicapilla

Ptilinopus doherty

R Talaud & Sangihe (Indonesia) R Ambon & Seram (Indonesia) R Fr. Polynesia, Kiribati, Tubuai Is. R Henderson I., Pitcairn V Society Is, Tuamotu Archipelago	(France) V Marquesas Is (France) I Buru (Indonesia) I New Caledonia (France)		E Moluccas (Indonesia) E Philippines E Tanimbar Is (Indonesia)		K* Australia E Australia R New Zealand R Australia E Australia I S. Australia
Blue-streaked Lory Red-and-blue Lory Purple-naped Lory Kuhl's Lorikeet Stephen's Lorikeet Blue Lorikeet	Ultramarine Lorikeet Blue-fronted Lorikeet New Caledonian Lorikeet	Yellow-crested Cockatoo Salmon-crested Cockatoo	White Cockatoo Red-vented Cockatoo Tanimbar Corella	Salvadori's Fig-parrot Green Racquet-tail Buru Racquet-tail Princess Parrot	Golden-Showdered Farrot Hooded Parrot Paradise Parrot Antipodes Parakeet Orange-bellied Parrot Scarlet-chested Parrot Ground Parrot
Eos reticulata Eos histrio Lorius domicella Vini kuhlii Vini stepheni	Vini ultramarina Charmosyna toxopei Charmosyna diadema Family Cacatuidae	Cacatua sulphurea Cacatua moluccensis	Cacatua alba Cacatua haematuropygia Cacatua goffini	Family Psittacidae Psittaculirostris salvadorii Prioniturus luconensis Prioniturus mada Polytelis alexandrae	Psephotus Crissopierygius Psephotus dissimilis Psephotus pulcherrimus Cyanoramphus unicolor Neophema chrysogaster Neophema splendida Pezoporus wallicus Geopsittacus occidentalis

Psittacula eques (replaces P.echo) Anodorhynchus hyacinthinus Anodorhynchus glaucus Psittacula intermedia Agapornis nigrigenis Loriculus catamene Psittacula caniceps

Anodorhynchus leari Ara glaucogularis Cyanopsitta spixii

Aratinga guarouba Ara rubrogenys

Aratinga erythrogenys Aratinga brevipes

Aratinga auricapillus Aratinga euops

Ognorhynchus icterotis Leptosittaca branickii

Rhynchopsitta pachyrhyncha Rhynchopsitta terrisi

Pyrrhura cruentata Pyrrhura orcesi

Pyrrhura hypoxantha Pyrrhura perlata

Pyrrhura albipectus Pyrrhura calliptera

Bolborhynchus ferrugineifrons Brotogeris pyrrhopterus Touit melanonota

Touit stictoptera

Touit surda

Slack-cheeked Lovebird Sangihe Hanging Parrot Rothschild's Parakeet Mauritius Parakeet Nicobar Parakeet Hyacinth Macaw Glaucous Macaw

Red-masked Parakeet Slue-throated Macaw Red-fronted Macaw Little Blue Macaw Golden Parakeet Socorro Parakeet Cuban Parakeet Lear's Macaw

Golden-plumed Parakeet Golden-capped Parakeet

Maroon-fronted Parrot Yellow-eared Parrot Thick-billed Parrot

Blue-throated Parakeet El Oro Parakeet

White-necked Parakeet Yellow-sided Parakeet Pearly Parakeet

3rown-breasted Parakeet Rufous-fronted Parakeet Grey-cheeked Parakeet

Brown-backed Parrolet Golden-tailed Parrotlet Spot-winged Parrotlet

Sangihe (Indonesia) Nicobar Is (India) India

Bolivia, Brazil, Paraguay Mauritius

Argentina, Brazil, Paraguay, [ruguay]

Bahia (Brazil)

Bolivia Brazil 回回

Bolivia Brazil

Revillagigedo Is (Mexico) Ecuador, Peru

Colombia, Ecuador, Peru Cuba Brazil

Colombia, Ecuador Mexico and U.S.A.

Mexico Brazil

Ecuador Brazil

Colombia Ecuador Brazil

Ecuador, Peru Colombia

Brazil Brazil

Colombia, Ecuador

	Descriptional Downort	K* C	Colombia Ecuador Venezuela
napatopsittaca anazonina	India Jacca I alloc		1 1 1
Hapalopsittaca fuertesi	Fuertes' Parrot		Colombia
Hapalopsittaca pyrrhops	Red-faced Parrot		Ecuador, Peru
Amazona leucocephala	Cuban Parrot	K* C	Cayman Is., Cuba
Amazona wittata	Puerto Rican Parrot		Puerto Rico
Amazona tucumana	Tucuman Parrot	*	Argentina, Bolivia
Amazona pretrei	Red-spectacled Parrot		Argentina, Brazil, Paraguay, Uruga
Amazona viridigenalis	Red-crowned Parrot		Mexico
Amazona brasiliensis	Red-tailed Parrot		Brazil
Amazona dufresniana	Blue-cheeked Parrot		Brazil, Venezuela, Guianas
Amazona rhodocorytha	Red-browed Parrot		Brazil
Amazona xanthops	Yellow-faced Parrot		Brazil
Amazona barbadensis	Yellow-shouldered Parrot		Netherlands Antilles, Venezuela
Amazona ochrocephala	Yellow-crowned Parrot		Central & South America
Amazona vinacea	Vinaceous Parrot	K* A	Argentina, Brazil, Paraguay
Amazona versicolor	St. Lucia Parrot		St Lucia
Amazona arausiaca	Red-necked Parrot		Dominica
Amazona guildingii	St. Vincent Parrot	R	St Vincent
Amazona imperialis	Imperial Parrot	E	Dominica
Triclaria malachitacea	Purple-bellied Parrot	K* E	Brazil
Strigops habroptilus	Kakapo	S E	South Island (New Zealand)
Order CUCULIFORMES Family Musonhagidae			
Tauraco bannermani Tauraco ruspolii	Bannerman's Turaco Prince Ruspoli's Turaco	田民	Cameroon Ethiopia
Romily Cronlidge			
Chrysococcyx rufomerus Coccyzus ferrugineus	Green-cheeked Bronze Cuckoo Cocos Cuckoo	I H	Romang & Damar (Indonesia) Costa Rica
Phaenicophaeus pyrrhocephalus	Red-faced Malkoha		India, Sri Lanka

Neomorphus radiolosus Carpococcyx radiceus Coua delalandei Centropus chlororhynchus Centropus rectunguis Centropus steerii Centropus nigrorufus

Order STRIGIFORMES Family Tytonidae

Tyto soumagnei
Tyto nigrobrunnea
Tyto inexspectata
Tyto sororcula
Tyto aurantia
Phodilus prigoginei

Family Strigidae

Otus sagittatus Otus ireneae Otus stresemanni Otus angelinae Otus alfredi Otus mindorensis

Otus pauliani Otus insularis

Otus hartlaubi Bubo vosseleri

Ketupa blakistoni Scotopelia ussheri Glaucidium albertinum

Banded Ground Cuckoo Sunda Ground Cuckoo Snail-eating Coua Green-billed Coucal Short-toed Coucal Steere's Coucal Javan Coucal Madagascar Red Owl Taliabu Owl Minahassa Owl Lesser Masked Owl Golden Owl Congo Bay Owl White-fronted Scops-owl
Sokoke Scops-owl
Sumatran Scops-owl
Javan Scops-owl
Flores Scops-owl
Mindoro Scops-owl
Grand Comoro Scops-owl
Seychelles Scops-owl
Sao Tome Scops-owl
Usambara Eagle-owl
Blakiston's Fish-owl
Rufous Fishing Owl

K* Colombia, Ecuador

K Brunei, Indonesia, Malaysia

Sri Lanka

Rrunei, Indonesia, Malaysia

I Mindoro (Philippines)
V Java (Indonesia)

I Madagascar

I Taliabu (Indonesia)
I Sulawesi (Indonesia)

I Buru & Tamimbar Is (Indonesia)

K New Britain (Papua New Guinea)

Burundi, Zaire

I Burma, Thailand, Indonesia, Malaysia

E Kenya

I Sumatra (Indonesia)
R Java (Indonesia)

I Flores (Indonesia)

R Mindoro (Indonesia)

K Comoro Is R Seychelles

R Sao Tome

China, Japan, U.S.S.R.

R West Africa R Rwanda, Zaire

Ex [India] K* Canada, U.S., Mexico	K Kalimantan (Indonesia), Sarawak (Malaysia)	K* Brazil, Colombia, Ecuador, Guyana, Paraguay, Peru, Venezuela K* Brazil K* Colombia, Ecuador, Guyana, Peru	I Sulawesi (Indonesia) Ex [Jamaica] R Puerto Rico K* Brazil, Paraguay I China I Sumatra & Java (Indonesia) K* Argentina, Brazil K* Argentina, Brazil	K* Colombia I Sumatra & Java (Indonesia), Peninsular Malaysia R Seychelles V Society Is (France)
Forest Owlet Spotted Owl	Dulit Frogmouth	Long-tailed Potoo White-winged Potoo Rufuous Potoo	Satanic Nightjar Jamaican Pauraque Puerto Rican Nightjar White-winged Nightjar Vaurie's Nightjar Salvadori's Nightjar Long-trained Nightjar Sickle-winged Nightjar	White-chested Swift Giant Swiftlet Seychelles Swiftlet Tahiti Swiftlet
hene blewitti rix occidentalis	Order CAPRIMULGIFORMES Family Podargidae trachostomus harterti	ranny Nycholada ctibius aethereus ctibius leucopterus ctibius bracteatus	Family Caprimulgidae rostopodus diabolicus phonorhis americanus primulgus noctitherus primulgus candicans primulgus centralasicus primulgus pulchellus acropsalis creagra eothreptus anomalus	Order APODIFORMES Family Apodidae pseloides lemosi ydrochous gigas rodramus elaphrus

Nyctibius leucopterus

Nyctibius bracteatus

Eurostopodus diabolicus

Caprimulgus noctitherus Siphonorhis americanus

Caprimulgus candicans

Caprimulgus centralasicus

Caprimulgus pulchellus

Eleothreptus anomalus

Macropsalis creagra

Cypseloides lemosi Hydrochous gigas Aerodramus leucophaeus

Aerodramus elaphrus

Strix occidentalis Athene blewitti

Batrachostomus harterti

Nyctibius aethereus

Schoutedenapus schoutedeni Aerodramus sawtelli Apus sladeniae

Apus acuticauda

Campylopterus ensipennis Sephanoides fernandensis Family Trochilidae Amazilia castaneiventris Hylonympha macrocerca Androdon aequatorialis Eriocnemis nigrivestris Eupherusa cyanophrys Eupherusa poliocerca Haplophaedia lugens Eriocnemis mirabilis Heliangelus regalis Coeligena prunellei Amazilia boucardi Eriocnemis godini Metallura odomae Eriocnemis derbyi Lepidopyga lilliae Popelairia letitiae Aglaeactis aliciae Amazilia distans Metallura baroni Amazilia luciae Glaucis dohrnii

Schouteden's Swift Fernando Po Swift Atiu Swiftlet

Dark-rumped Swift

Panama, Colombia, Ecuador Chestnut-bellied Hummingbird Sapphire-bellied Hummingbird Scissor-tailed Hummingbird Juan Fernandez Firecrown Purquoise-throated Puffleg Footh-billed Hummingbird White-tailed Hummingbird Slue-capped Hummingbird Mangrove Hummingbird Purple-backed Sunbeam White-tailed Sabrewing Slack-breasted Puffleg **Slack-thighed Puffleg** Hook-billed Hermit Honduran Emerald Coppery Thorntail Pachira Emerald Colorful Puffleg Royal Sunangel Hoary Puffleg Black Inca

Cook Is.

Zaire.

Angola, Cameroon, Fernando Po (Equatorial Guinea), Nigeria

India

Pobago (Trinidad), Venezuela Bahia, Espirito Santo (Brazil) Juan Fernandez Is (Chile) Colombia, Ecuador Colombia, Ecuador Venezuela Costa Rica Venezuela Honduras Colombia Colombia Colombia Colombia Ecuador Ecuador Ecuador Mexico Mexico Bolivia Peru Peru Peru

Brazil

Peru

7iolet-throated Metaltail

Veblina Metaltail

Hyacinth Visorbearer Grey-bellied Comet

Taphrolesbia griseiventris

Augastes scutatus

Marvellous Spatuletail Bee Hummingbird Chilean Woodstar Little Woodstar Esmeraldas Woodstar Glow-throated Hummingbird
Loddigesia mirabilis Calypte helenae Eulidia yarrellii Acestrura bombus Acestrura ardens

	R Bolivia, Chile K* Ecuador, Peru	K* Ecuador K* Panama		K* Mexico, U.S.A. K* Costa Rica, Panama
Marvellous Spatuletail Bee Hummingbird	Chilean Woodstar Little Woodstar	Esmeraldas Woodstar Glow-throated Hummingbird	Resplendent Quetzal	Eared Trogon Baird's Trogon

Order TROGONIFORMES

Family Trogonidae Pharomachrus mocinno

Euptilotis neoxenus

Trogon bairdii

China, Bangladesh, Bhutan, Burma, India, Nepal, Vietnam	Lesser Sundas (Indonesia)	Tuamotu Archipelago (France)	Marquesas Is (France)	Papua New Guinea, Solomon Is	Mindano (Philippines)	Indonesia
щ	> ~	1 22	>	—	>	>
Blyth's Kingfisher	Cinnamon-banded Kingfisher Monmis Kindfisher	Tuamotu Kingfisher	Marquesas Kingfisher	Moustached Kingfisher	Blue-capped Wood Kingfisher	Biak Paradise Kingfisher

A THROHESTE	K* Central America	Madagascar Madagascar Madagascar
>	**	战战战
biak raradise Kingusher	Keel-billed Motmot	Short-legged Ground Roller Scaly Ground Roller Rufous-headed Ground Roller

Family Brachypteraciidae

Family Momotidae

Electron carinatum

Halcyon bougainvillei Actenoides hombroni

Halcyon godeffroyi

Tanysiptera riedelii

Brachypteracias squamigera Brachypteracias leptosomus

Atelornis crossleyi

Halcyon australasia

Halcyon mangaia Halcyon gambieri

Order CORACIIFORMES

R Madagascar	R SE Asia R Thailand, Brunei, Indonesia, Malaysia V Sumba (Indonesia) I Burma, India, Thailand, Indonesia R Andaman Is (India) R Sulu Is (Philippines) K Burma, Indonesia, Malaysia, Thailand	K* Brazil	 K* Colombia V Colombia, Ecuador R Java (Indonesia) I Zambia 	K Cameroon, Ghana, Liberia	K* Peru	V U.S.A. K Cuba
Long-tailed Ground Roller	Rufous-necked Hornbill Wrinkled Hornbill Sumba Hornbill Plain-pouched Hornbill Narcondam Hornbill Sulu Hornbill Helmeted Hornbill	Three-toed Jacamar	White-mantled Barbet Toucan Barbet Black-banded Barbet White-chested Tinkerbird	Yellow-footed Honeyguide	Yellow-browed Toucanet	Red-cockaded Woodpecker Cuban Flicker
Uratelornis chimaera Family Bucerotidae	Aceros nipalensis Aceros corrugatus Aceros everetti Aceros subruficollis Aceros narcondami Anthracoceros montani Rhinoplax vigil	Order PICIFORMES Family Galbulidae Jacamaralcyon tridactyla	Family Capitonidae Capito hypoleucus Semnornis ramphastinus Megalaima javensis Pogoniulus makawai	Family Indicatoridae Melignomon eisentrauti	Family Ramphastidae Aulacorhynchus huallagae	Family Picidae Picoides borealis Colaptes fernandinae

Argentina, Brazil, Paraguay Argentina, Brazil, Paraguay Brazil, Ecuador, Peru Ryukyu Is (Japan) Argentina, Chile Laos, Vietnam Uganda, Zaire Bolivia, Peru Cuba, U.S.A. Venezuela Venezuela Mexico Bolivia Brazil Peru Brazil Brazil Brazil Peru Chiie Peru Peru Peru Peru Peru * 田田田 Chestnut-throated Spinetail White-browed Tit-spinetail Canebrake Groundcreeper Moustached Woodcreeper Red-collared Woodpecker White-throated Barbtail vory-billed Woodpecker African Green Broadbill Alagoas Foliage-gleaner **Line-fronted Canastero** Russet-mantled Softtail White-bellied Cinclodes Russet-bellied Spinetail Helmeted Woodpecker Imperial Woodpecker Okinawa Woodpecker Pale-tailed Canastero Masafuerae Raydito Bolivian Recurvebill Apurimac Spinetail Austral Canastero Striated Softtail Orinoco Softtail Royal Cinclodes Plain Spinetail Family Dendrocolaptidae Order PASSERIFORMES Clibanornis dendrocolaptoides Family Eurylaimidae Pseudocalyptomena graueri Family Furnariidae Leptasthenura xenothorax Xiphocolaptes falcirostris Campephilus principalis Thripophaga berlepschi Campephilus imperialis Aphrastura masafuerae Asthenes urubambensis Thripophaga macroura Asthenes huancavelicae Thripophaga cherriei Simoxenops striatus Sapheopipo noguchii Synallaxis infuscata Asthenes anthoides Cinclodes palliatus Dryocopus Raleatus Cinclodes aricomae Synallaxis courseni Synallaxis zimmeri Synallaxis cherriei Margarornis tatei Philydor novaesi Picus rabieri

Automolus ruficollis Automolus erythrocephalus Megaxenops parnaguae

Family Formicariidae

Rhegmatorhina hoffmannsi Herpsilochmus pectoralis Thamnomanes plumbeus Formicivora erythronotos Thamnophilus zarumae Herpsilochmus pileatus Cercomacra carbonaria Myrmeciza stictothorax Herpsilochmus parkeri Cercomacra brasiliana Thamnophilus praecox Myrmeciza griseicens Phlegopsis barringeri Formicivora iheringi Myrmeciza ruficauda Rhopornis ardesiaca Mymotherula grisea Mymotherula minor Biatas nigropectus Xenornis setifrons Clytoctantes alixii Terenura sharpei Pyriglena atra Terenura sicki

Rufous-necked Foliage-gleaner Henna-hooded Foliage-gleaner Great Xenops

Ecuador, Peru Ecuador, Peru

Brazil

* * * *

Colombia, Venezuela

Ecuador, Peru Ecuador, Peru

Argentina, Brazil

Panama, Colombia

Brazil Brazil Bolivia

Brazil

Brazil Peru

Rufous-fronted Antthrush White-bearded Antshrike Yellow-rumped Antwren Orange-bellied Antwren Recurve-billed Bushbird White-breasted Antbird Fringe-backed Fire-eye Narrow-billed Antwren Rio de Janeiro Antbird Black-hooded Antwren Ash-throated Antwren Black-capped Antwren Spot-breasted Antbird Chapman's Antshrike Plumbeous Antshrike 3rey-headed Antbird Moustached Antpitta Salvadori's Antwren Speckled Antshrike Rio Branco Antbird Pectoral Antwren Scalloped Antbird Jocha Antshrike Slender Antbird Argus Bare-eye Giant Antpitta Ashy Antwren

Bolivia, Peru

Brazil Brazil

Brazil Brazil Colombia, Ecuador

Colombia

Colombia

Peru

Formicarius rufifrons

Frallaria gigantea

Grallaria alleni

Brazil

Brazil

Scuador, Peru

Brazil

Bahia (Brazil) Bahia (Brazil)

Brazil

rallaria chthonia rallaria rufocinerea rallaria milleri rallaricula lineifrons rallaricula cucullata Hooded Antpitta	Family Conopophagidae opophaga roberti	Family Rhinocryptidae Stresemann's Bristlefront cytalopus novacapitalis	Family Cotingidae iisoma elegans	hibalura flavirostris hibalura flavirostris hibalura flavirostris hibalura flavirostris melanocephalus mpelion stresemanni odopleura pipra hipaugus lanioides chinga ridgwayi chinga ridgwayi cipholena atropurpurea ciphalopterus glabricollis Cephalopterus penduliger Family Pipridae Sywallow-tailed Cotinga Grey-winged Cotinga Barcheeked Cotinga White-winged Cotinga White-winged Cotinga Yellow-billed Cotinga Bare-necked Umbrellabird Long-wattled Umbrellabird	Black-capped Manakin
K K I K K	K* B	нн	***	er K** If K**	K *
Venezuela Colombia Colombia Colombia, Ecuador Colombia, Venezuela	Brazil	Bahia (Brazil) Goias (Brazil)	Bolivia, Brazil, Colombia, Ecuad Peru, Venezuela	Argentina, Bolivia, Brazil Brazil Peru Brazil Brazil Costa Rica, Panama Brazil Costa Rica, Panama	Argentina, Brazil

dor,

Laniisoma elegans

Tijuca condita

Ampelion streseman

Lipaugus lanioides

Iodopleura pipra

Cotinga maculata Cotinga ridgwayi

Grallaricula cuculla

Grallaricula lineifro

Grallaria rufocinere

Grallaria milleri

Grallaria chthonia

Family Conopo Conopophaga robert Merulaxis streseman

Scytalopus novacapi

K* Brazil	K* Brazil K* Ecuador, Peru K* Brazil K* Brazil K* Venezuela K* Bolivia, Peru K* Brazil			K* Argentina, Brazil, Paraguay, UruguayK* Peru	E Sumatra (Indonesia) R Cambodia, Laos, Thailand, Vietnam
Golden-crowned Manakin	Zimmer's Tody-tyrant Cinnamon-breasted Tody-tyrant Kaempfer's Tody-tyrant Fork-tailed Tody-tyrant Short-tailed Tody-flycatcher Ash-breasted Tit-tyrant Bananal Tyrannulet	Sharp-tailed Tyrant Bearded Tachuri Grey-backed Tachuri Minais Gerais Tyrannulet	Sao Paulo Tyrannulet Long-tailed Tyrannulet Russet-winged Spadebill Grey-breasted Flycatcher Black-and-White Monjita White-tailed Shrike-tyrant	Strange-tailed Tyrant Peruvian Plantcutter	Schneider's Pitta Bar-bellied Pitta
Pipra vilasboasi	Family Tyrannidae Hemitricus aenigma Hemitricus cinnamomeipectus Idioptilon kaempferi Ceratotricus furcatus Todirostrum viridanum Anairetes alpinus	Culicipora caudacuta Polystictus pectoralis Polystictus superciliaris	Phylloscartes paulistus Phylloscartes ceciliae Platyrinchus leucoryphus Empidonax griseipectus Xolmis dominicana Agriornis andicola	Yetapa risoria Family Phytotomidae Phytotoma raimondi	Family Pittidae Pitta schneideri Pitta elliotii

Burma, Thailand Luzon (Philippines) China, Hong Kong, Japan, S. Korea, Taiwan, Malaysia	Bismarck Arch. (Papua New Guinea) Philippines Bougainville, Solomon Is.	[New Zealand]	Madagascar	Australia W. Australia	Somalia Ethiopia Somalia Lesotho, Swaziland Ethiopia South Africa Cape Verde Is.	Thailand Bahamas Ethiopia Sudan
田工民	цин	Ex	H	民區	KKLLLHK	TXKX
Gurney's Pitta Whiskered Pitta Fairy Pitta	Superb Pitta Azure-breasted Pitta Black-faced Pitta	Bush Wren	Small-billed Asity	Rufous Scrub-bird Noisy Scrub-bird	Ash's Lark Degodi Lark Archer's clawed Lark Rudd's Lark Sidamo Lark Botha's Lark Raso Lark	White-eyed River Martin Bahama Swallow White-tailed Swallow Red Sea Cliff Swallow
Pitta gurneyi Pitta kochi Pitta nympha	Pitta superba Pitta steerii Pitta anerythra	Family Xenicidae Xenicus longipes	Family Philepittidae Neodrepanis hypoxanthus	Family Atrichornithidae Atrichornis rufescens Atrichornis clamosus	Family Alaudidae Mirafra ashi Mirafra degodiensis Heteromirafra archeri Heteromirafra sidamoensis Spizocorys fringillaris Alauda razae	Family Hirundinidae Pseudochelidon sirintarae Tachycineta cyaneoviridis Hirundo megaensis

Family Motacillidae

Anthus sokokensis Anthus chacoensis Anthus nattereri Anthus chloris

Family Campephagidae

Coracina coerulescens Campephaga lobata Coracina schistacea Coracina newtoni Coracina ostenta Coracina typica Coracina sula

Family Pycnonotidae

Pycnonotus nieuwenhuisii Phyllastrephus tenebrosus Phyllastrephus cinereiceps Phyllastrephus leucolepis Chlorocichla prigoginei Phyllastrephus apperti Criniger olivaceus

Hypsipetes siquijorensis Hypsipetes olivaceus

Family Laniidae

Laniarius liberatus Prionops gabela

Yellow-breasted Pipit Ochre-breasted Pipit Sokoke Pipit Chaco Pipit

White-winged Cuckoo-shrike Mauritius Cuckoo-shrike Reunion Cuckoo-shrike Slackish Cuckoo-shrike 3hana Cuckoo-shrike Slaty Cuckoo-shrike Sula Cuckoo-shrike

Grey-crowned Greenbul Yellow-bearded Bulbul Prigogine's Greenbul Slue-Wattled Bulbul Appert's Greenbul Liberian Greenbul Dusky Greenbul

Streak-breasted Bulbul Mauritius Bulbul

Gabela Helmet-shrike Buulobarde Boubou

Lesotho, Southern Africa Kenya, Tanzania

Argentina, Paraguay

Argentina, Brazil, Paraguay

Banggai & Sula Is (Indonesia) Mauritius

Reunion

Luzon (Philippines)

Sula Is (Indonesia)

Philippines

Ghana, Guinea, Cote d'Ivoire, Liberia, Sierra Leone

Kalimantan & Sumatra (Indonesia) Zaire

Liberia

Madagascar

Madagascar

Madagascar

Ghana, Guinea, Cote d'Ivoire, Liberia, Senegal, Sierra Leone

Philippines Mauritius

Angola

Somalia

Cameroon Cameroon, Nigeria Tanzania Angola, Cameroon Sao Tome	Madagascar Madagascar	Argentina, Bolivia	K* Mexico V Colombia R Mexico I Cuba K* Colombia	K* Galapagos Is. (Ecuador)E Socorro Is (Mexico)E Martinique, St Lucia	China, India Mozambique, Tanzania, Zimbabwe Angola Kenya, Malawi, Mozambique, Tanzania Mongolia, China
Mount Kupe Bush-Shrike Green-breasted Bush-shrike Uluguru Bush-shrike Monteiro's Bush-shrike I Sao Tome Fiscal Shrike	Van Dam's Vanga Pollen's Vanga	Rufous-throated Dipper	Slender-billed Wren Apolinar's Marsh Wren Socorro Wren Zapata Wren Niceforo's Wren K*	Floreana Mockingbird Socorro Mockingbird E White-breasted Thrasher	Rusty-bellied Shortwing Swynnerton's Robin Gabela Akalat East Coast Akalat Rufous-headed Robin
Malaconotus kupeensis Malaconotus gladiator Malaconotus alius Malaconotus monteiri Lanius newtoni	Family Vangidae Xenopirostris damii Xenopirostris polleni	Family Cinclidae Cinclus schulzi	Family Troglodytidae Hylorchilus sumichrasti Cistothorus apolinari Thryomanes sissonii Ferminia cerverai Thryothorus nicefori Troglodytes tanneri	Family Mimidae Nesomimus trifasciatus Mimodes graysoni Ramphocinclus brachyrus	Family Muscicapidae Brachypteryx hyperythra Swynnertonia swynnertoni Sheppardia gabela Sheppardia gunningi Luscinia ruficeps

l'imor, Roti, & Semau (Indonesia) Kalimantan (Indonesia), Sabah & E. Africa, Southern Africa, Zaire Mongolia, China, India, Nepal Lesser Sundas (Indonesia) Saudi Arabia, N. Yemen Tanimbar Is (Indonesia) Tanimbar Is (Indonesia) Mozambique, Tanzania Malawi, Mozambique Hawaiian Is (U.S.A.) Hawaiian Is (U.S.A.) Sumatra (Indonesia) Hawaiian Is (U.S.A.) Sarawak (Malaysia) Luzon (Philippines) Canary Is. (Spain) Java (Indonesia) China, Thailand India, Pakistan Angola, Zaire Madagascar Madagascar Seychelles Seychelles Sri Lanka Tanzania Tanzania Uganda Kenya Sri Lanka Whistling-thrush White-headed Robin-chat Jsambara Ground Robin Tuerteventura Stonechat Seychelles Magpie Robin White-browed Bushchar Spotted Ground-thrush White-bellied Bushchat Orange-banded Thrush Fawn-breasted Thrush Porest Ground-thrush Kibale Ground-thrush Slack-throated Robin ringa Ground Robin 3enson's Rockthrush Jodgson's Bushchat Slaty-backed Thrush Sumatran Cochoa Everett's Thrush Juzon Redstart Amami Thrush Yemen Thrush Dapple-throat Thyolo Alethe avan Cochoa 3lack Shama **Faita** Thrush Olomao ²uaiohi Kamao Dryocichloides montanus Modulatrix orostruthus Myadestes myadestinus Copsychus sechellarum

China, Burma, India, Thailand

Frey-sided Thrush

Furdus menachensis

Turdus feae

Zoothera machiki

Turdus helleri

Zoothera major

Saxicola macrorhynca

Saxicola insignis

Saxicola dacotiae

Ayadestes palmeri

Zoothera oberlaenderi

Zoothera kibalensis

Zoothera fischeri

Myiophoneus blighi

Saxicola gutturalis

Monticola bensoni

Zoothera schistacea

Zoothera peronii Zoothera everetti

Ayadestes lanaiensis

Copsychus cebuensis

Rhyacornis bicolor

Cochoa beccarii Cochoa azurea

Dryocichloides lowei

Alethe choloensis

Cossypha heinrichi

Erithacus obscura

Western Whipbird	₩	Australia
Marsh Babbler Diof. Promod Pokklon	⊀ ⊦	Bangladesh, India
Diack-browed Daubler	-4 ⊦-	Nammantan (Indonesia)
Vanderblit's babbier Death Debble	→ ⊢	Sumatra (Indonesia)
Dagono Daoniei	-1 F	vinidano (Filmppines)
Short-tailed Scimitar-babbler	→ ;	Vietnam
Rabor's Wren-babbler	X ,	Luzon (Philippines)
Rusty-throated Wren-babbler	-	India
Rufous-throated Wren-babbler	M	Bhutan, India, Nepal
Tawny-breasted Wren-babbler	앮	India
Wedge-billed Wren-babbler	23	Burma, India
Deignan's Babbler	23	Thailand
Flame-templed Babbler	>	Negros & Panay (Philippines)
Negros Babbler	Λ	Negros & Panay (Philippines)
White-breasted Babbler	^	Java (Indonesia)
Sooty Babbler	E E	Laos
Snowy-throated Babbler	M M	India
Jerdon's Babbler	>	Bangladesh, Burma, India, Nepa
		Pakistan
Hinde's Pied Babbler	Λ	Kenya
Ashy-headed Laughingthrush	^	Sri Lanka
Black-hooded Laughingthrush	н	Vietnam
Sukatschev's Laughingthrush	K	China
White-speckled Laughingthrush	н	China
Collared Laughingthrush	н	Vietnam
Emei Shan Liocichla	24	China
Gold-fronted Fulvetta	^	China
Grey-crowned Crocias	—	Vietnam
Madagascar Yellowbrow	н	Madagascar
Black-breasted Parrotbill	Ι	Bangladesh, Bhutan, Burma, Inc
		Nepal
Crested Parrotbill	24	China

Paradoxornis zappeyi

Paradoxornis flavirostris

Crossleyia xanthophrys

Alcippe variegaticeps

Crocias langbianis

Liocichla omeiensis

Garrulax yersini

Garrulax bieti

Garrulax sukatschewi

Garrulax cinereifrons

Garrulax milleti

Turdoides hindei

Stachyris grammiceps

Stachyris herberti

Stachyris nigrorum

Moupinia altirostris

Stachyris oglei

Trichastoma perspicillatum

Psophodes nigrogularis

Pellorneum palustre

Trichastoma vanderbilti

Spelaeornis longicaudatus

Sphenocichla humei

Stachyris rodolphei Stachyris speciosa

Spelaeornis badeigularis

Jabouilleia danjoui

Napothera rabori

Leonardina woodi

Spelaeornis caudatus

China, Bangladesh, Bhutan, Burma, Burundi, Kenya, Rwanda, Uganda, Surundi, Rwanda, Tanzania, Zaire Burundi, Rwanda, Uganda, Zaire Cameroon, Eq. Guinea, Gabon, China, Burma, Laos, Thailand, China, India, Nepal, Pakistan Kenya, Malawi, Mozambique, Bangladesh, India, Pakistan Western Palaearctic, Africa Cameroon, Chad, Nigeria Mozambique, Tanzania Rodrigues (Mauritius) ndia, Laos, Vietnam Hawaiian Is (U.S.A.) Aldabra (Seychelles) Socotra (S. Yemen) Tanzania, Uganda Cameroon, Gabon Zaire, Zambia West Africa Solomon Is. Seychelles **Fanzania** Vietnam **Panzania** Nigeria Nauru Kenya Zaire Cuba White-necked Picathartes Large-billed Bush-warbler Seychelles Brush Warbler Rodrigues Brush Warbler Grey-necked Picathartes Rufous-headed Parrotbill Papyrus Yellow Warbler Frauer's Scrub-warbler Streaked Reed-warbler Mrs Moreau's Warbler Short-tailed Parrotbill Sombre Leaf Warbler Nauru Reed-warbler Fana River Cisticola White-winged Apalis Cuban Gnatcatcher Long-tailed Prinia Long-billed Apalis Ja Scrub-warbler Aquatic Warbler Aldabra Warbler Socotra Cisticola Karamoja Apalis Kungwe Apalis Kabobo Apalis River Prinia Millerbird

Paradoxornis przewalskii Paradoxornis davidianus

Paradoxornis ruficeps

Picathartes gymnocephalus Picathartes oreas

Acrocephalus sorghophilus Acrocephalus rodericanus Acrocephalus sechellensis Acrocephalus paludicola Chloropeta gracilirostris Acrocephalus familiaris Bradypterus grandis Nesillas aldabranus Acrocephalus rehsei Bradypterus graueri Bradypterus major Polioptila lembeyei

Phylloscopus amoenus Cisticola haesitata Cisticola restricta Prinia fluviatilis Apalis chariessa Prinia burnesii

Bathmocercus winifredae Apalis kaboboensis Apalis karamojae Apalis argentea Apalis moreaui

Przewalski's Parrotbill

Megalurus albolimbatus Macrosphenus pulitzeri Amaurocichla bocagii Chaetornis striatus Eremomela turneri Megalurus pryeri

Melaenornis annamarulae Aphelocephala pectoralis Rhinomyias albigularis Rhinomyias brunneata Humblotia flavirostris Dasyornis longirostris Gerygone hypoxantha Newtonia fanovanae Amytornis dorotheae Rhinomyias colonus Ficedula timorensis Amytornis barbatus Ficedula bonthaina Malurus coronatus Amytornis goyderi Amytornis textilis Trichocichla rufa Muscicapa lendu Ficedula harterti Ficedula henrici Petroica traversi Cyornis sanfordi Cyornis herioti Cyornis ruecki Batis minima

Bristled Grass Warbler Turner's Eremomela Sao Tome Short-tail Fly River Grassbird Pulitzer's Longbill Marsh Grassbird

White-throated Jungle-flycatcher **Brown-chested Jungle-flyzatcher** Henna-tailed Jungle-flycatcher Chestnut-breasted Whiteface Purple-crowned Fairy-wren Carpentarian Grass-wren Lompobattang Flycatcher Rueck's Blue Flycatcher Black-banded Flycatcher Thick-billed Grass-wren Damar Blue Flycatcher Long-legged Warbler Western Bristlebird Matinan Flycatcher Eyrean Grass-wren Sumba Flycatcher Nimba Flycatcher Grass-wren Biak Gerygone

Grand Comoro Flycatcher **3lue-breasted Flycatcher** Thatham Island Robin Red-tailed Newtonia Chapin's Flycatcher Gabon Batis

Kenya, Uganda, Zaire

Sao Tome

Bangladesh, India, Nepal China, Japan

Papua New Guinea, Irian Jaya Indonesia)

Australia

Australia

Australia Australia Australia

Biak (Indonesia) Australia

Cote d'Ivoire, Liberia Australia

Guimaras & Negros (Philippines)

Sula Is & Peleng (Indonesia) China, India

Jamar (Indonesia)

Sulawesi (Indonesia) Sumba (Indonesia)

Sulawesi (Indonesia) Timor (Indonesia)

Sumatra (Indonesia) Juzon (Philippines)

Kenya, Uganda, Zaire Comoros

Chatham Is (New Zealand) Madagascar Gabon

China, Bangladesh, Bhutan, Burma, Siak & Numfor (Indonesia) l'anahjampea (Indonesia) China, Burma, Thailand Cook Is (New Zealand) (rian Jaya (Indonesia) Sangihe (Indonesia) India, Laos, Vietnam Marquesas (France) Marquesas (France) Marquesas (France) Caroline Is (F.S.M.) Society Is (France) Boano (Indonesia) Biak (Indonesia) Guam (U.S.A.) Solomon Is. Philippines Solomon Is. Philippines Sevchelles Cameroon Australia Vietnam Taiwan Algeria Burma China India Seychelles Paradise Flycatcher Caerulean Paradise Flycatcher White-browed Nuthatch Slack-masked Nuthatch Short-crested Monarch Slack-chinned Monarch White-tipped Monarch Yellow-billed Nuthatch Marquesas Monarch Sanded Wattle-eye Rarotonga Monarch Beautiful Nuthatch Red-lored Whistler Algerian Nuthatch Celestial Monarch Vogelkop Whistler atuhiva Monarch Rennell Shrikebill White-winged Tit Guam Flycatcher Fahiti Monarch Giant Nuthatch Siak Flycatcher Malaita Fantail phis Monarch Fruk Monarch Siak Monarch Yellow Tit Pachycephala rufogularis Clytorhynchus hamlini Eutrichomyias rowleyi **Family Paridae** Family Sittidae Platysteira laticincta Terpsiphone corvina Hypothymis coelestis Monarcha boanensis Pachycephala meyeri Hypothymis helenae Metabolus rugiensis Rhipidura malaitae Pomarea dimidiata Pomarea mendozae Monarcha brehmii Pomarea whitneyi Monarcha everetti Myiagra freycineti Sitta yunnanensis Pomarea nigra Pomarea iphis Parus nuchalis Sitta solangiae Sitta victoriae

Myiagra atra

Sitta formosa Sitta magna

Sitta ledanti

Parus holsti

R Luzon (Philippines)	R Natuna Is (Indonesia), Peninsular Malaysia & Sarawak	K* Australia	R Tanzania R Kenya, Tanzania			R Tanzania R Tanzania	V Sangihe & Siau (Indonesia)		R Java & Kalimantan (Indonesia), Sarawak (Malaysia)	I Kai Is (Indonesia) R. Sulawesi (Indonesia)						-	R Comoros	V Mauritius	
Long-billed Rhabdornis	Brown-backed Flowerpecker	Forty-spotted Pardalote	Banded Green Sunbird Amani Sunbird	Apricot-breasted Sunbird Rockefeller's Sunbird	Marunga Sunbird	Rufous-winged Sunbird	Elegant Sunbird		Javan White-eye	Golden-bellied White-eye	Tagula White-eye	Ambon Yellow White-eye	Splendid White-eye	Nendo White-eye	White-chested White-eye	Seychelles White-eye	Mount Karthala White-eye	Mauritius Olive White-eye	
Family Rhabdornithidae habdornis grandis	Family Dicaeidae icaeum everetti	aradalotus quadragintus	Family Nectariniidae nthreptes rubritorques nthreptes pallidigaster	ectarinia buettikoferi	lectarinia prigoginei	ectarinia rufipennis rentes thomensis	ethopyga duyvenbodei	Family Zosteropidae	osterops flavus	osterops uropygialis	osterops meeki	osterops kuehni	osterops luteirostris	osterops sanctaecrucis	osterops albogularis	sterops modestus	osterops mouroniensis	sosterops chloronothus	

Aethopyga duyvenbodei

Dreptes thomensis

Zosterops flavus

Zosterops uropygialis

Zosterops anomalus

Zosterops sanctaecrucis

Zosterops kuehni

Zosterops meeki

Zosterops albogularis

Zosterops modestus

Anthreptes pallidigaster Anthreptes rubritorques

Nectarinia buettikoferi

Nectarinia rockefelleri

Nectarinia prigoginei Nectarinia rufipennis

Paradalotus quadragintus

Dicaeum everetti

Rhabdornis grandis

Woodfordia lacertosa Speirops leucophaea Madanga ruficollis Speirops brunneus Rukia longirostra Heleia muelleri Rukia ruki

Family Meliphagidae

Philemon fuscicapillus spalopteron familiare sichmera notabilis lotiomystis cincta Myzomela kuehni Meliphaga vicina ohilemon brassi

Xanthomyza phrygia Manorina melanotis Melidectes princeps Moho braccatus Moho bishopi

Family Emberizidae

Torreornis inexpectata Xenospingus concolor Emberiza sulphurata Rowettia goughensis Nesospiza acunhae Nesospiza wilkinsi Xenospiza baileyi Junco insularis

Bioko (Equatorial Guinea) Principe (Sao Tome) Nendo (Solomon Is) Timor (Indonesia) Buru (Indonesia) Truk Is (F.S.M.) Pohnpei (F.S.M.) Rufous-throated White-eye Spot-breasted White-eye Pernando Po Speirops Jong-billed White-eye Sanford's White-eye Principe Speirops Truk White-eye

Crimson-hooded Honeyeater Black-chested Honeyeater **Bonin Islands Honeyeater** Pagula Meliphaga Brass's Friarbird Stitchbird

Long-bearded Melidectes Regent Honeyeater Black-eared Miner Bishop's Oo Kauai Oo

Dusky Friarbird

Japanese Yellow Bunting Sierra Madre Sparrow Slender-billed Finch Grosbeak Bunting Guadalupe Junco Tristan Bunting Zapata Sparrow Gough Bunting

Netar (Indonesia)

Fagula I. (Papua New Guinea) Wetar (Indonesia) Bonin Is (Japan)

North Is (New Zealand) rian Jaya (Indonesia)

Halmahera, Bacan & Morotai (Indonesia)

Papua New Guinea

Hawaiian Is (U.S.A.) Hawaiian Is (U.S.A.)

Australia

Australia

China, Japan, Taiwan, Philippines Tristan da Cunha Guadalupe Mexico Cuba

Tristan da Cunha Tristan da Cunha Chile, Peru

Buthraupis melanochlamys Chlorospingus flavovirens Buthraupis aureodorsalis Oreothraupis arremonops Camarhynchus heliobates Conothraupis mesoleuca Melanospiza richardsoni Sporophila cinnamomea Coryphaspiza melanotis Buthraupis aureocincta Sporophila hypochroma Camarhynchus pauper Sporophila falcirostris Habia atrimaxillaris Sporophila palustris Amaurospiza moesta Atlapetes pallidiceps Gubernatrix cristata Sporophila insulata Sporophila frontalis Saltator rufiventris Atlapetes flaviceps Sporophila zelichi Poospiza rubecula Habia gutturalis Poospiza garleppi Poospiza alticola Vemosia rourei Incaspiza ortizi Poospiza baeri

Argentina, Brazil, Paraguay, Uruguay Argentina, Bolivia, Brazil, Paraguay Argentina, Brazil, Paraguay Argentina, Brazil, Paraguay Argentina, Brazil, Uruguay Galapagos (Ecuador) Galapagos (Ecuador) Colombia, Ecuador Colombia, Ecuador Argentina, Bolivia Argentina, Brazil Argentina, Brazil Rio de Janeiro Costa Rica Argentina Argentina Colombia Colombia Colombia Colombia Colombia St Lucia Ecuador Bolivia Bolivia Brazil Peru Peru Peru Golden-backed Mountain-tanager Rufous-breasted Warbling-finch Cochabamba Mountain-finch Slack-cheeked Ant-tanager Yellow-green Bush-tanager Plain-tailed Warbling-finch Rufous-rumped Seedeater Cherry-throated Tanager Tucuman Mountain-finch **Buffy-throated Seedeater** Olive-headed Brush-finch Pale-headed Brush-finch Blackish-blue Seedeater Slack-and-gold Tanager Rufous-bellied Saltator Frev-winged Inca-finch Temminck's Seedeater St. Lucia Black Finch Entre Rios Seedeater Gold-ringed Tanager Cone-billed Tanager Slack-masked Finch Chestnut Seedeater Floreana Tree-finch Sooty Ant-tanager 'umaco Seedeater Marsh Seedeater Mangrove Finch Yellow Cardinal Panager-finch

Vetmorethraupis sterrhopteron Tangara meyerdeschauenseei Chlorochrysa nitidissima Tangara peruviana Suphonia chalybea Dacnis albiventris Tangara fastuosa Tangara cabanisi Tangara phillipsi

Diglossa venezuelensis Dacnis berlepschi Dacnis hartlaubi Dacnis nigripes

Family Parulidae Dendroica chrysoparia Vermivora bachmanii

Conirostrum tamarugense Basileuterus cinereicollis Conirostrum margaritae Basileuterus griseiceps Seothlypis flavovelata Dendroica kirtlandii Catharopeza bishopi Xenoligea montana Dendroica vitellina Reothlypis speciosa Leucopeza semperi Myioborus pariae

Green-throated Euphonia Drange-throated Tanager Azure-rumped Tanager Seven-colored Tanager Multicoloured Tanager Green-capped Tanager Black-backed Tanager White-bellied Dacnis Sira Tanager

Venezuelan Flowerpiercer Scarlet-breasted Dacnis Black-legged Dacnis Turquoise Dacnis

Golden-cheeked Warbler Bachman's Warbler

White-winged Ground Warbler Black-polled Yellowthroat Pearly-breasted Conebill Grey-throated Warbler Altamira Yellowthroat Yellow-faced Redstart Grey-headed Warbler Kirtland's Warbler Tamarugo Conebill Whistling Warbler Semper's Warbler Vitelline Warbler

Peru

Argentina, Brazil, Paraguay Colombia

Mexico

Brazil

Brazil Peru

Peru

Brazil, Colombia, Ecuador, Peru, Venezuela Colombia

Colombia, Ecuador Brazil

Venezuela

Bahamas, Cuba, U.S.A.

Guatemala, Honduras, Mexico, Nicaragua

Honduras

Sahamas, Canada, Mexico, U.S.A.

St Vincent Mexico

St Lucia Mexico

Venezuela

Colombia, Venezuela Venezuela

Dominican Rep., Haiti Brazil, Peru Chile, Peru

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Hemignathus munroi
Hemignathus obscurus
Hemignathus lucidus
Oreomystis bairdi
Paroreomyza flammea
Paroreomyza maculata
Loxops coccineus
Pseudonestor xanthophrys
Telespiza ultima
Telespiza cantans
Psithirostra psittacea
Loxioides bailleui
Melamprosops phaeosoma
Palmeria dolei

Family Vireonidae

Vireo atricapillus

Family Icteridae

Psaracolius cassini Psarocolius bifasciatus Cacicus koepckeae Icterus bonana Icterus oberi Xanthopsar flavus Agelaius xanthomus Sturnella defilippi Hypopyrrhus pyrohypogaster Curaeus forbesi

Akiapolaau	>	Hawaii (U.S.A.)
Akialoa		Hawaii (U.S.A.)
Nukupuu	臼	Hawaii (U.S.A.)
Kauai Creeper		Hawaii (U.S.A.)
Mulokai Creeper	Ex	[Hawaii (U.S.A.)]
Dahu Creeper		Hawaii (U.S.A.)
Akepa		Hawaii (U.S.A.)
Maui Parrotbill		Hawaii (U.S.A.)
Nihoa Finch	R	Hawaii (U.S.A.)
Laysan Finch	2	Hawaii (U.S.A.)
Ou	闰	Hawaii (U.S.A.)
Palila	R	Hawaii (U.S.A.)
Poo Uli	24	Hawaii (U.S.A.)
Crested Honeycreeper	R	Hawaii (U.S.A.)

Black-capped Vireo

Chestnut-mantled Oropendola Para Oropendola Selva Cacique Martinique Oriole Montserrat Oriole Saffron-cowled Sunbird Yellow-shouldered Blackbird Lesser Red-breasted Meadowlark Red-bellied Grackle Forbes's Blackbird

V* Oklahoma, Texas (U.S.A.), Mexico

V* Okla

K* Colombia
K* Brazil
K* Peru
V Martinique (Lesser Antilles)
V Montserrat (Leeward Is)

K* Argentina, Bolivia, Brazil, Paraguay, Uruguay

K* Argentina, Brazil, UruguayK* Colombia

Puerto Rico

K* Brazil

K* Colombia	R Canary Is (Spain) R Ethiopia I Ethiopia I Sao Tome K* Brazil, Venezuela E Venezuela K* Ecuador R Somalia	K Nigeria K Zaire R India R Luzon (Philippines) R Mindano (Philippines) K Fiji K* Australia	V Cameroon, Nigeria R Angola, Congo K Angola, Congo, Gabon, Z K Zaire E Kenya I Zaire R India V Zaire R Tanzania
Bronze-brown Cowbird	Blue Chaffinch Ankober Serin Yellow-throated Serin Sao Tome Grosbeak Yellow-faced Siskin Red Siskin Saffron Siskin	Anambra Waxbill Black-lored Waxbill Green Avadavat Green-faced Parrotfinch Red-eared Parrotfinch Pink-billed Parrotfinch Gouldian Finch	Bannerman's Weaver Bates's Weaver Black-chinned Weaver Loango Weaver Lake Lufira Weaver Clarke's Weaver Golden-naped Weaver Finn's Baya Weaver Yellow-legged Weaver Tanzanian Mountain Weaver
Molothrus armenti	Family Fringillidae Fringilla teydea Serinus ankoberensis Serinus flavigula Neospiza concolor Carduelis yarrellii Carduelis siemiradzkii Acanthis johannis	Family Estrildidae Estrilda poliopareia Estrilda nigriloris Amandava formosa Erythrura viridifacies Erythrura coloria Erythrura kleinschmidti Chloebia gouldiae	Family Ploceidae Ploceus bannermani Ploceus batesi Ploceus nigrimentum Ploceus subpersonatus Ploceus golandi Ploceus aureonucha Ploceus megarhynchus Ploceus flavipes Ploceus nicolli

abon, Zaire

 K* Uganda E Nigeria I Cote d'Ivoire, Liberia, Sierra Leone E Mauritius R Seychelles E Rodrigues (Mauritius) 	I Vanuatu Ex [Caroline Islands (F.S.M.)] E Cook Is. K* Kenya, Tanzania E Bali (Indonesia) R Banggai & Sula Is (Indonesia) R Sula Is (Indonesia)	R Luzon (Philippines) I China R Comoros R Mayotte (France)		K Irian Jaya (Indonesia) R Papua New Guinea
Entebbe Weaver Ibadan Malimbe Gola Malimbe Mauritius Fody Seychelles Fody Rodrigues Fody	Santo Mountain Starling Pohnpei Mountain Starling Rarotonga Starling Abbott's Starling Bali Starling Helmeted Myna Bare-eyed Myna	Isabela Oriole Silver Oriole Grand Comoro Drongo	Kokako Saddleback	Golden-fronted Bowerbird Fire-maned Bowerbird
62	dis	a a	a S	hynchidae

Family Oriolidae

Streptocitta albertinae

Basilornis galeatus

Family Dicrurida

Oriolus isabellae Oriolus mellianus Dicrurus fuscipennis

Dicrurus waldenii

Family Callaeida

Creadion carunculatus

Callaeas cinerea

Family Ptilonork

Amblyornis flavifrons

Sericulus bakeri

Malimbus ibadanensis

Ploceus victoriae

Malimbus ballmanni

Foudia sechellarum

Foudia rubra

Foudia flavicans

Family Sturnidae

Aplonis santovestris

Cinnyricinclus femora Leucopsar rothschildi

Aplonis cinerascens

Aplonis pelzelni

Family Paradisaeidae	Paradigalla carunculata

Epimachus fastuosus

Astrapia mayeri

Parotia wahnesi Paradisaea decora

Family Corvidae

Cyanolyca pulchra
Cyanolyca nana
Cyanolyca mirabilis
Cyanocorax caeruleus
Perisoreus internigrans
Urocissa ornata
Crypsirina cucullata
Zavattariornis stresemanni
Corvus unicolor
Corvus florensis
Corvus kubaryi
Corvus hawaiiensis

Long-tailed Paradigalla

Black Sicklebill

Ribbon-tailed Astrapia

Wahnes's Parotia Goldie's Bird of Paradise Beautiful Jay
Dwarf Jay
White-throated Jay
Azure Jay
Sichuan Jay

Sri Lanka Magpie Hooded Treepie Ethiopian Bush-crow Banggai Crow

Flores Crow Marianas Crow Hawaiian Crow

R Irian Jaya (Indonesia), Papua New

Guinea Jaya (Indonesia), Papua New Guinea Irian Jaya (Indonesia), Papua New

Guinea Papua New Guinea

Papua New Guinea

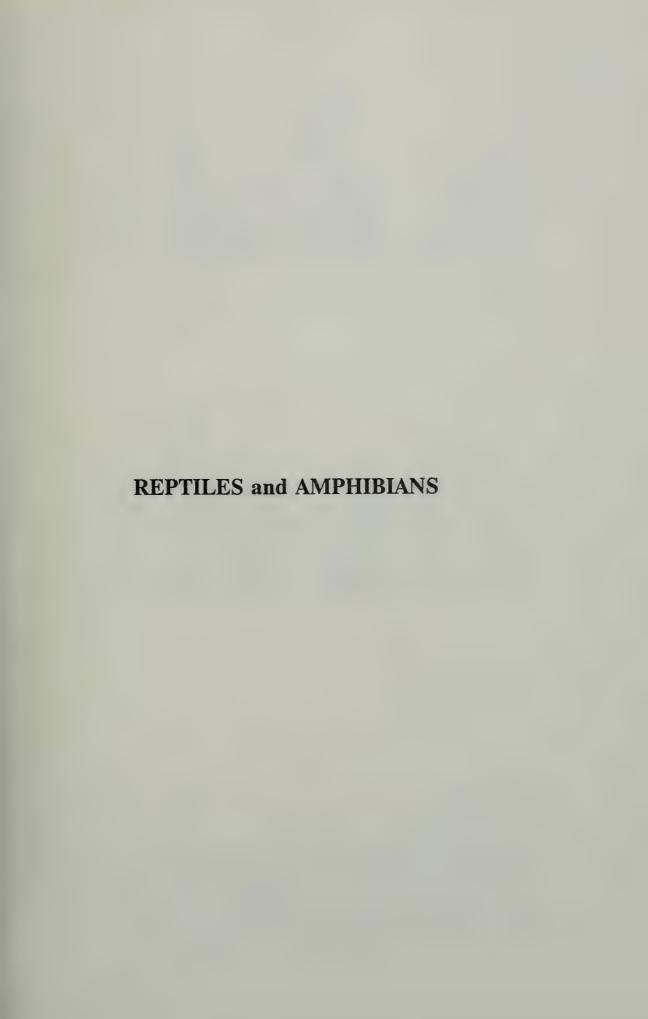
Colombia, Ecuador
Mexico

Mexico
 Argentina, Brazil

V China V Sri Lanka V Burna R Ethiopia R Banggai (Indonesia)

R Flores (Indonesia)

Guam (U.S.A.) Hawaiin Is (U.S.A.)





Class REPTILIA

Order TESTUDINES
Family Carettochelyidae
Carettochelys insculpta

Family Chelidae
Acanthochelys macrocephala
Acanthochelys spixii
Acanthochelys spixii
Phrynops dahli
Phrynops rufipes
Phrynops rufipes
Phrynops zuliae
Pseudemydura umbrina

Family Cheloniidae
Caretta caretta
Chelonia mydas
Eretmochelys imbricata
Lepidochelys kempii
Lepidochelys olivacea

Family Chelydridae Macroclemys temmimckii Family Dermatemyidae Dermatemys mawii

Family Dermochelyidae Dermochelys coriacea

K Australia, New Guinea	Brazil	Argentina, Paraguay	Argentina, Brazil, Uruguay	Colombia	Brazil	Brazil, Colombia	Venezuela	Western Australia
×	X	出	X	-	H	M	M	团
New Guinea Plateless Turtle	Big-headed Pantanal Swamp Turtle	Chaco Sideneck Turtle	Black Spine-necked Swamp Turtle	Dahl's Toad-headed Turtle	Hoge's Sideneck Turtle	Red-headed Sideneck Turtle	Zulia Toad-headed Turtle	Western Swamp Turtle

Loggerhead Turtle Green Turtle Hawksbill Turtle Kemp's or Atlantic Ridley Olive or Pacific Ridley

Subtropical & Temperate Seas Tropical Seas & Mediterranean

Tropical Seas Gulf of Mexico

> 田田田田

Iropical Seas

U.S.A.

Alligator Snapping Turtle

Central American River Turtle V Central America

Leatherback E Tropical & Temperate Seas

Graptemys flavimaculata Annamemys annamensis Melanochelys tricarinata Cistoclemys galbinifrons Cistoclemys hainanensis Pseudemys alabamensis Family Emydidae Zlemmys muhlenbergii Rhinoclemmys rubida Callagur borneoensis Geoclemys hamiltonii Kachuga sylhetensis Graptemys oculifera Suora yunnanensis Graptemys barbouri Terrapene coahuila Geoemyda silvatica Heosemys depressa Heosemys leytensis Kachuga trivittata Heosemys spinosa Kachuga kachuga Orlitia borneensis Graptemys caglei Morenia ocellata Batagur baska

Trachemys scripta callirostris Trachemys stejnegeri malonei Trachemys terrapen felis rachemys decorata Terrapene nelsoni

Thailand, Indonesia, Malaysia Bangladesh, India, Nepal Bangladesh, India, Nepal Colombia, Venezuela ndonesia, Malaysia Leyte (Philippines) Sangladesh, India Hainan (China) South Asia Hispaniola S.E. Asia S.E. Asia Bahamas 3ahamas Vietnam Vietnam Burma Burma Mexico Mexico Mexico U.S.A. U.S.A. U.S.A. U.S.A. U.S.A. Burma China India South American Red-lined Turtle Mexican Spotted Wood Turtle Yellow-blotched Map Turtle Red-crowned Roofed Turtle Mabama Red-bellied Turtle **Burmese Roofed Turtle** Malaysian Giant Turtle ndochinese Box Turtle Pricarinate Hill Turtle Sarbour's Map Turtle **Surmese Eyed Turtle** Arakan Forest Turtle Assam Roofed Turtle Spotted Pond Turtle nagua Island Turtle Annam Leaf Turtle Yunnan Box Turtle Cagle's Map Turtle Ringed Map Turtle Aquatic Box Turtle Spotted Box Turtle Hainan Box Turtle evte Pond Turtle Hispaniolan Slider Jat Island Turtle Painted Terrapin River Terrapin Spiny Turtle Cane Turtle 30g Turtle

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Kinosternon angustipons Sternotherus depressus Kinosternon creaseri Kinosternon oaxacae Kinosternon dunni

Family Pelomedusidae

Erymnochelys madagascariensis Podocnemis erythrocephala Podocnemis sextuberculata Pelusios seychellensis Podocnemis expansa Podocnemis lewyana Podocnemis unifilis

Family Testudinidae

Gopherus flavomarginatus Geochelone elephantopus Malacochersus tornieri Gopherus polyphemus Geochelone chilensis Gopherus berlundieri Indotestudo elongata Indotestudo forstenii Geochelone platynota Geochelone yniphora Geochelone gigantea Geochelone radiata Gopherus agassizii Homopus bergeri

Costa Rica, Nicaragua, Pa Mexico Colombia Mexico U.S.A.	Madagascar Seychelles Brazil, Venezuela Amazon Basin Colombia Brazil, Colombia, Peru Amazon Basin
まりまし >	LKKELK>
Narrow-bridged Mud Turtle Creaser's Mud Turtle Dunn's Mud Turtle Oaxaca Mud Turtle Flattened Musk Turtle	Madagascar Side-necked Turtle Seychelles Mud Turtle Red-headed Amazon Turtle South American River Turtle Rio Magdalena River Turtle Pitiu Yellow-spotted Sideneck Turtle

Chaco Tortoise	>	Argentina, Paragu
Galapagos Giant Tortoise	>	Galapagos Is (Ecue
Aldabra Giant Tortoise	路	Aldabra (Seychelle
Burmese Starred Tortoise	X	Burma
Radiated Tortoise	>	Madagascar
Angonoka	臼	Madagascar
Desert Tortoise	>	Mexico, U.S.A.
Texas Gopher Tortoise	П	Mexico, U.S.A.
Bolson Tortoise	臼	Mexico
Florida Gopher Tortoise	>	U.S.A.
Berger's Tortoise	X	Namibia
Elongated Tortoise	K	India, S.E. Asia
Travancore Tortoise	ద	India, Indonesia*
Pancake Tortoise	×	Kenya, Tanzania

s Is (Ecuador) , Paraguay

Seychelles)

K S.E. Asia K S.E. Asia V South Africa I Madagascar I Madagascar V Europe, North Africa V Europe V E. Mediterranean E W. Mediterranean V Egypt, Israel, Libya R Greece	R Bangladesh	R New Zealand	V Sri Lanka V Philippines	K U.S.A.	I U.S.A.	V South Africa
Burmese Brown Tortoise Impressed Tortoise Geometric Tortoise Spider Tortoise Madagascar Flat-shelled Tortoise Spur-thighed Tortoise Hermann's Tortoise Hermann's Tortoise Hermann's Tortoise Egyptian Tortoise Margined Tortoise	Black Soft-shell Turtle	Tuatara	Leaf-nosed Lizard Sail-fin Lizard	Panamint Alligator Lizard	Black Legless Lizard	Smith's Dwarf Chamaeleon
Manouria emys Manouria impressa Psammobates geometricus Pyxis arachnoides Pyxis planicauda Testudo graeca graeca Testudo hermanni Testudo hermanni hermanni Testudo kleinmanni Testudo arginata	Family Trionychidae Trionyx nigricans	Order RHYNCHOCEPHALIA Family Sphenodontidae Sphenodon punctatus	Order SAURIA Family Agamidae Ceratophora tennentii Hydrosaurus pustulatus	Family Anguidae Gerrhonotus panamintinus	Family Anniellidae Anniella pulchra nigra	Family Chamaeleontidae Bradypodion taneniabronchum

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Phelsuma edwardnewtonii Phyllodactylus europaeus Nactus serpensinsula Phelsuma guentheri Oedura reticulata

Family Helodermatidae

Heloderma suspectum Heloderma horridum

Family Iguanidae

Amblyrhynchus cristatus Conolophus subcristatus Brachylophus fasciatus Brachylophus vitiensis Conolophus pallidus Cyclura carinata Anolis roosevelti

Phrynosoma coronatum blainvillei Cyclura cychlura Cyclura cornuta Cyclura pinguis Cyciura ricordii Gambelia silus Cyclura nubila Cyclura collei Cyclura rileyi

Uma inornata

European Leaf-toed Gecko Reticulated Velvet Gecko Serpent Island Gecko Rodriguez Day Gecko Gunther's Gecko

Beaded Lizard Gila Monster

South Pacific Banded Iguana Purks & Caicos Rock Iguana Culebra Island Giant Anole Galapagos Marine Iguana Barrington Land Iguana Galapagos Land Iguana Fiji Crested Iguana

Hispaniola Ground Iguana Jamaican Ground Iguana Anegada Ground Iguana Rhinoceros Rock Iguana Andros Ground Iguana Cuban Ground Iguana

Coachella Fringe-toed Lizard San Joaquin Leopard Lizard San Diego Horned Lizard

Round I., Serpent I. (Mauritius) W. Australia 张 > 图 图 系

Mauritius

Round I. (Mauritius)

France, Italy, Tunisia

Guatemala, Mexico Mexico, U.S.A.

Culebra I. (Puerto Rico) Galapagos Is (Ecuador)

Galapagos Is (Ecuador)

Ponga, Fiji

Galapagos Is (Ecuador)

Sahamas, Turks & Caicos Is (West ndies)

Hispaniola, Mona I. (Puerto Rico) **3ahamas**

Jamaica

Cayman Is (West Indies), Cuba

Anegada (British Virgin Is) Hispaniola

Bahamas

U.S.A.

Mexico, U.S.A.

E Hierro (Canary Is) R Filfola I. (Malta) V Spain R Spain	R Australia R Mauritius Ex? Cape Verde Is R Pedra Brance I. (Australia) I Shortland I. (Solomon Is) I Australia	E U.S. Virgin Is V Mexico, U.S.A.	I Bangladesh, India, Nepal, Pa V Central-west Asia R Indonesia R Luzon (Philippines)	R U.S.A.	K Peninsular Malaysia
Hierro Giant Lizard Filfola Lizard Lilford's Wall Lizard Ibiza Wall lizard	Legless Skink Lancelin Island Skink Macabe Forest Skink Cape Verde Giant Skink Pedra Branca Skink Adelaide Pigmy Bluetongue Lizard	St. Croix Ground Lizard Orange-throated Whiptail	Yellow Monitor Central Asian Monitor Komodo Dragon Gray's Monitor	Island Night Lizard	Leonard's Pipe Snake
Family Lacertidae Gallotia simonyi Podarcis filfolensis filfolensis Podarcis lilfordi Podarcis pityusensis	Family Scincidae Barkudia insularis Ctenotus lancelini Gongylomorphus bojerii fontenayi Macroscincus coctaei Pseudemoia palfreymani Tribolonotus ponceleti Triliqua adelaidensis	Family Teiidae Ameiva polops Cnemidophorus hyperythrus	Family Varanidae Varanus flavescens Varanus griseus caspius Varanus komodoensis Varanus olivaceus	Family Xantusiidae Xantusia riversiana	Order SERPENTES Family Aniliidae Anomochilus leonardi

akistan

9	
Boidae	
Family	

Acrantophis dumerili
Acrantophis madagascariensis
Bolyeria multicarinata
Casarea dussumieri
Charina bottae umbratica
Epicrates angulifer
Epicrates inornatus
Epicrates monensis monensis
Epicrates striatus fosteri
Epicrates striatus fosteri
Epicrates subflavus
Python molurus
Sanzinia madagascariensis

Family Colubridae

Coluber cypriensis
Drymarchon corais couperi
Elachistodon westermanni
Iguanognathus werneri
Masticophis flagellum ruddocki
Masticophis lateralis euryxanthus
Natrix natrix cetti
Nerodia fasciata taeniata
Nerodia sipedon insularum
Thamnophis gigas
Thamnophis sirtalis tetrataenia

Thermophis baileyi

Madagascar U.S.A. Cuba Round Island Keel-scaled Boa Southern Rubber Boa Madagascar Tree Boa Round Island Boa Puerto Rican Boa Cuban Tree Boa Madagascar Boa Jumeril's Boa ndian Python famaican Boa Bimini Boa Mona Boa

Eastern Indigo Snake Indian Egg-eating Snake San Joaquin Coachwhip Almeda Striped Racer Sardinian Grass Snake Atlantic Saltmarsh Snake Concho Water Snake Lake Erie Water Snake Giant Garter Snake Two-striped Garter Snake San Francisco Garter Snake

Sangladesh, India, Nepal South & South-east Asia Mona I. (Puerto Rico) Round I. (Mauritius) Round I. (Mauritius) Sumatra (Indonesia) Sardinia (India) Mexico, U.S.A. Puerto Rico Madagascar Madagascar Bahamas Jamaica Cyprus U.S.A. U.S.A. U.S.A. U.S.A. U.S.A. U.S.A.

Family Elapidae Brachyaspis atriceps Hoplocephalus bunaroides Naja oxiana Ogmodon vitianus

Family Hydrophiidae Laticauda crockeri

Family Typhlopidae Typhlops monensis

Family Viperidae Bothrops insularis Crotalus unicolor Crotalus willardi Vipera ammodytes transcaucasiana Vipera bornmuelleri Vipera bulgardaghica Vipera kaznakovi Vipera latifii

Order CROCODYLIA Family Alligatoridae

Vipera ursinii rakosiensis

Vipera wagneri

Vipera schweizeri

Vipera raddei

Aligator sinensis Caiman latirostris Melanosuchus niger

d-headed Snake	ral Asian Cobra	inake (Bolo)
Broad-hea	Central As	Fiji Snake

Central Asia

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Australia Australia

R Mon	Mona Blind Snake R Mon	a I. (Puerto l
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	ld Snake	-
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Rennel I. (Solomon Is)

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ueimada Island Bothrops	ruba Island Rattlesnake	tidge-nosed Rattlesnake	ranscaucasian Long-nosed Viper
Queimada 1	Aruba Islan	Ridge-nosec	Transcauca

Latifi's Viper Armenian Viper	Milos Viper	Orsini's Viper
Lat Arr	Mil	Ors
	Latifi's Viper Armenian Viper	Latifi's Viper Armenian Viper Milos Viper

Queimada I. (Brazil)	Netherland Antilles, Venezuela	Mexico, U.S.A.	Turkey, U.S.S.R.	Lebanon, Syria	Turkey	Turkey, U.S.S.R.	Iran	Iran, Turkey, U.S.S.R.	Cyclades Is (Greece)	Central Eastern Europe	Turkey, Iran	
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broad-nosed Calman	=1	Southern South An
Black Caiman	[A	South America

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E Caribbean, Central America, U.S.A. I Africa E Colombia, Venezuela, Peru E Philippines E Central America V Africa, Madagascar V Asia, Australia, West Pacific E Cuba E South-east Asia E South-east Asia	E South Asia	R Mexico E U.S.A. R Mexico V U.S.A.	I China R Japan
American Crocodile African Slender-snouted Crocodile Orinoco Crocodile Philippines Crocodile Morelet's Crocodile Nile Crocodile Estuarine Crocodile Cuban Crocodile Siamese Crocodile False Gharial	Gharial	Lake Patzcuaro Salamander Lake Lerma Salamander Santa Cruz Long-toed Salamander Axolotl California Tiger Salamander	Chinese Giant Salamander Japanese Giant Salamander

Class AMPHIBIA

Family Gavialidae

Gavialis gangeticus

Crocodylus rhombifer Crocodylus siamensis Tomistoma schlegelii

Crocodylus porosus

Family Crocodylidae

Crocodylus cataphractus

Crocodylus acutus

Crocodylus intermedius

Crocodylus mindorensis

Crocodylus moreletii Crocodylus niloticus Crocodylus palustris Ambystoma macrodactylum croceum

Family Ambystomatidae Ambystoma dumerilii dumerilii

Order CAUDATA

Ambystoma lermaensis

Ambystoma tigrinum californiense

Ambystoma mexicanum

Family Cryptobranchidae

Andrias davidianus

Andrias japonicus

Afghanistan

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Family Hynobiidae Batrachuperus mustersi

Family Plethondontidae	Batrachoseps simatus Batrachoseps stebbinsi Eurycea nana Hydromantes brunus Hydromantes shastae Phaeognathus hubrichti	Plethodon larselli Plethodon neomexicanus Plethodon nettingi Plethodon stormi	Speleomantes flavus Speleomantes genei Speleomantes imperialis Speleomantes supramontes Typhlomolge rathbuni Typhlotriton spelaeus
Family Plethondontida	Batrachoseps simatus Batrachoseps stebbinsi Eurycea nana Hydromantes brunus Hydromantes shastae Phaeognathus hubrichti	Plethodon larselli Plethodon neomexicanus Plethodon nettingi Plethodon stormi	Speleomantes flavus Speleomantes genei Speleomantes imperialis

Family Proteidae

Proteus anguinus

Family Salamandridae Chioglossa lusitanica Paramesotriton deloustali

E U.S.A.	R U.S.A.	R U.S.A.	R U.S.A.	R U.S.A.	R U.S.A.	R U.S.A.	I U.S.A.	V U.S.A.	K U.S.A.	K U.S.A.	R Sardinia (Italy)	V Sardinia (Italy)	R Sardinia (Italy)	R Sardinia (Italy)	E U.S.A.	K U.S.A.	V Italy, Yugoslavia	I Portugal, Spain	I Vietnam
Desert Slender Salamander	Kern Canyon Slender Salamander	Tehachapi Slender Salamander	San Marcos Salamander	Limestone Salamander	Shasta Salamander	Red Hills Salamander	Larch Mountain Salamander	Jemez Mountains Salamander	Cheat Mountain Salamander	Siskiyou Mountains Salamander		Sardinian or Brown Cave Salamander			Texas Blind Salamander	Grotto Salamander	Olm	Gold-striped Salamander	Vietnamese Salamander

NURA Bufonidae	nelsoni	nensis	nes nis	Nectophrynoides occidentalis	empi	uberculosus
Order ANURA Family Bufonidae	Bufo boreas nelsoni Bufo exsul	Bufo houstonensis	Bufo periglenes Bufo retiformis	Nectophrynoides	Pedostibes kempi	Pedostibes tuberculosus

Family Discoglossidae Alytes muletensis Discoglossus jeanneae Discoglossus montalentii	Discoplossus morningiter
Alyte Disco	1)180

ae		Dseudacris streckeri illinoensis
Family Hylidae	soni	strecker
Family	Tyla anderson	udacris
	Hyl	Pse

Family Hyperoliidae Tachycnemis seychellensis

Family Leptodactylidae Batrachophrynus macrostomus

U.S.A. U.S.A. U.S.A. U.S.A. Costa Rica Mexico, U.S.A. Guinea, Cote d'Ivoire India	Mallorca (Spain) Spain Corsica (France) Israel	U.S.A. U.S.A.	Seychelles	N. Island (NZ) New Zealand N. Island (NZ)	Peru
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Amargosa Toad Black Toad Houston Toad Golden Toad Sonoran Green Toad Mount Nimba Viviparous Toad Malabar Tree Toad Garo Hill Tree Toad	Mallorcan Midwife Toad Israel Painted Frog	Pine Barrens Tree Frog Illinois Chorus Frog	Seychelles Tree Frog	Archey's Frog Hamilton's Frog Hochstetter's Frog	Lake Junin Giant Frog

Puerto Rico Argentina	India	Victoria Australia Australia	Italy	South Africa	Cameroon, Eq. Guinea Seychelles Fiji U.S.A. Turkey Italy, Switzerland, Yugosl Seychelles Seychelles
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Golden Cocqui Frog	Black Microhylid	Baw Baw Frog Conondale Gastric-brooding Frog Eungella Gastric-brooding Frog	Italian Spadefoot Toad	Cape Platanna	Goliath Frog Thomasset's Seychelles Frog Fijian Ground Frog Vegas Valley Leopard Frog Italian Agile Frog Gardiner's Seychelles Frog Seychelles Frog

slavia

Sooglossus sechellensis

Sooglossus gardineri

Rana latastei

Nesomantis thomasseti

Conraua goliath

Platymantis vitianus

Rana fisheri Rana holtzi

Family Ranidae

Pelobates fuscus insubricus

Family Pipidae

Xenopus gilli

Family Pelobatidae

Rheobatrachus vitellinus

Rheobatrachus silus

Philoria frosti

Family Myobatrachidae

Somuncuria somuncurensis

Eleutherodactylus jasperi

Family Microhylidae

Melanobatrachus indicus





Class CEPHALASPIDOMORPHI

Order PETROMYZONTIFORMES	Family Petromyzontidae	Lampetra hubbsi	Lampetra macrostoma	Lampetra minima	Lampetra tridentata (subspecies)	Mordania mason
Orde	Fami	Lampetra	Lampetra	Lampetra	Lampetra	Mordania

Class CHONDRICHTHYES

der LAMINIFORMES mily Rhincodontidae don typus	
E # 0	Craef LAMINIFORMES Family Rhincodontidae Rhincodon typus

Carcharodon carcharias Family Lamnidae Cetorhinus maximus

Class OSTEICHTHYES

Order COELACANTHIFORMES Family Latimeriidae Latimeria chalumnae

Order ACIPENSERIFORMES Acipenser oxyrhynchus (subspecies) Family Acipenseridae Acipenser brevirostrum Acipenser fulvescens

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Kern Brook Lamprey	Lake Lamprey	Miller Lake Lamprey	Pacific Lamprey	Non-parasitic Lamprey

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Australia [U.S.A.] U.S.A. Canada

sea	
warm temperate	
warm	
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Tropical	
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Sub-tropical & warm temperate	Temperate waters
K	X

Great White Shark

Whale Shark

Basking Shark

seas

Comoros, [South Africa]

Coelacanth

Canada, U.S.A.	Canada, U.S.A.	Canada IISA
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Shortnose Sturgeon

Atlantic Sturgeon

Lake Sturgeon

N N N N N N N N N N N N N N N N N N N	E Europe R U.S.S.R. E U.S.A.	V U.S.A. V China	K Amazon Basin K South-east Asia	R Cambodia, Thailand	R. Thirkey		V South Africa	R South Africa		V South Africa	D Nomikie Court Africa			R South Africa
Amir Stirdeon	Common Sturgeon Kaluga Pallid Sturgeon Alabama Sturgeon	Paddlefish Chinese Paddlefish	Pirarucu Asian Bonytongue	Indochina Featherback	Cirek	Dalmatian Barbelgudgeon	Suver Snark Cape Whitefish	Clanwilliam Redfin	Clanwilliam Yellowfish	Twee River Redfin	Nomograph Bomb	Sawfin		Slender Redfin
Arinenser schrencki	Acipenser sturio Huso dauricus Scaphirhynchus albus Scaphirhynchus sp.	Family Polyodontidae Polyodon spathula Psephurus gladius	Order OSTEOGLOSSIFORMES Family Osteoglossidae Arapaima gigas Scleropages formosus	Family Notopteridae Notopterus blanci	Order CYPRINIFORMES Family Cyprinidae Aconthorntilus handlirschi	Aulopyge hugeli	Barbus andrewi Barbus andrewi	Barbus calidus	Barbus capensis	Barbus erubescens	Barhus hoenes	Barbus serra	Barbus somphongsi	Barbus tenuis

V South Africa V South Africa E Zaire R Iraq V Philippines R Thailand V Mexico	V U.S.A. V W.S.A. V U.S.A. E Mexico V Mexico V Mexico V Mexico	E Mexico V Mexico V Mexico V Mexico E Mexico V U.S.A. Ex [Mexico]	
Treur River Barb Border Barb African Blind Barb Fish Sardinita Bocagrande Blue Shiner	Bluestripe Shiner Beautiful Shiner Turquoise Shiner Conchos Shiner Proserpine Shiner Sardinita Nazas	Cuatro Cienegas Shiner Devil's River Minnow Sardinita de Rio Verde Roundnose Minnow Sardinita Quijarrona Desert Dace Mexican Dace	Mexican Dace Mexican Dace Alvord Chub Tui Chub Borax Lake Chub Thicktail Chub Humpback Chub Charalito Sonorense Bonytail Chub
Barbus treurensis Barbus trevelyani Caecobarbus geertsi Caecocypris basimi Cephalokompsus pachycheilus Chela caeruleostigmata Cyprinella bocagrande	Cyprinella callitaenia Cyprinella callitaenia Cyprinella monacha Cyprinella panarcys Cyprinella proserpina	Cyprinella xanthicara Dionda diaboli Dionda dichroma Dionda episcopa (subspecies) Dionda mandibularis Eremichthys acros	Evarra eigenmanni Evarra tlahuacensis Garra barreimiae Garra dunsirei Gila alvordensis Gila boraxobius Gila boraxobius Gila crassicauda Gila crassicauda Gila elegans

Mexico], U.S.A. Mexicol, U.S.A. Mexico, U.S.A. Mexico, U.S.A. Mexico, U.S.A. Mexico, U.S.A. South Africa Philippines Sri Lanka U.S.A.] Mexico Mexico] U.S.A. Mexico Mexico J.S.A. U.S.A. J.S.A. J.S.A. Mexico Mexico U.S.A. U.S.A. U.S.A. J.S.A. U.S.A. J.S.A. J.S.A. J.S.A. ran Little Colorado Spinedace Sardinita de Tepelmene White River Spinedace Sardinita de Rio Verde Pahranagat Spinedace Calnwilliam Sandfish Charalito Chihuahua Rio Grande Minnow Blackmouth Shiner Rio Grande Shiner Sardinita del Pilon Cape Fear Shiner /irgin Spinedace Charalito Saltillo **Sluehead Shiner** Smalleye Shiner Durango Shiner Roundtail Chub Sturgeon Chub Cahaba Shiner Sicklefin Chub Ameca Shiner Slender Chub Green Labeo Flame Chub Moapa Dace Yaqui Chub Least Chub Gila Chub Spikedace (subspecies) Gila robusta (subspecies) Notropis aguirrepequenoi Lepidomeda mollispinis Sotichthys phlegethontis Notropis melanostomus Notropis mekistocholas epidomeda albivallis Mandibularca resinus Hybognathus amarus Hemitremia flammea epidomeda altivelis franocypris typhlops Lepidomeda vittata Notropis jemezanus Notropis moralesi Notropis aulidion Notropis cahabae Notropis imeldae Notropis buccula Notropis amecae Gila intermedia Hybopsis gelida Notropis hubbsi Moapa coriacea Gila nigrescens Hybopsis meeki Hybopsis cahni Gila purpurea Gila modesta Meda fulgida Labeo seeberi Labeo fisheri

Mexico, U.S.A.1 Mexico], U.S.A. Mexico], U.S.A. South-east Asia South Africa South Africa South Africa Philippines Philippines Philippines Philippines Philippines Philippines hilippines Philippines Philippines Sri Lanka Sri Lanka resotho U.S.A. J.S.A. J.S.A. U.S.A. Mexico U.S.A. U.S.A. J.S.A. U.S.A. U.S.A. U.S.A. U.S.A. **Duachita Mountain Shiner** Mountain Blackside Dace Sacramento Splittail Sardinita de Salado Clear Lake Splittail Roughhead Shiner Kanawha Minnow Colorado Squafish Berg River Redfin Sharpnose Shiner Bluntnose Shiner Burchell's Redfin Phantom Shiner Colorless Shiner Bluenose Shiner Tennessee Dace Iwo Spot Barb Maluti Minnow lkan Temoleh Oregon Chub Fiery Redfin Noundfin Pogonichthys macrolepidotus Pseudobarbus quathlambae Phoxinus cumberlandensis Plagopterus argentissimus Ospatulus palaemophagus Pseudobarbus phlegethon Phoxinus tennesseensis Pseudobarbus burchelli Pogonichthys ciscoides Oregonichthys crameri Phenacobius teretulus Notropis oxyrhynchus Notropis semperasper Notropis perpallidus Ospatulus truncatus Ptychocheilus lucius Pseudobarbus burgi Puntius flavifuscus Notropis saladonis Probarbus jullieni Puntius cataractae Puntius cumingii Notropis snelsoni Puntius clemensi Puntius baoulan Notropis welaka Puntius amarus Notropis simus Puntius asoka Puntius herrei Notropis orca Puntius disa

Philippines Philippines Philippines Philippines

Sri Lanka

Sri Lanka

Philippines

Sri Lanka Sri Lanka

Philippines

田田 Vateria Flower Rasbora Stumptooth Minnow Side Striped Barb Black Ruby Barb Tokyo Bitterling Las Vegas Dace Longnose Dace Sandhills Chub Speckled Dace Loach Minnow Spotted Loach Cherry Barb Relict Dace Ayumodoki Rhinichthys cataractae (subspecies) Rhinichthys osculus (subspecies) Sinocyclocheilus anophthalmus Lepidocephalichthys jonklaasi Typhdobarbus nudiventris Family Cobitididae Typhlogarra widdowsoni Puntius nigrofasciatus Puntius pleurotaenia Puntius srilankensis Rhinichthys deaconi Rasbora vaterifloris Puntius lanaoensis Tylognathus klatti Relictus solitarius Puntius mamalak Stypodon signifer Semotilis lumbee Puntius lindong Leptobotia curta Tanakia tanago Tiaroga cobitis Puntius palata Puntius sirang Puntius katalo Puntius tumba Puntius titteya Puntius tras

Canada, Mexico, U.S.A. Mexico], U.S.A. Canada, U.S.A. Philippines Philippines Sri Lanka Sri Lanka **Chailand** Mexico] Turkey U.S.A.] U.S.A. U.S.A. apan Japan China China China

"Nemacheilus" troglocataractus Family Balitoridae "Nemacheilus" gejiuensi

Sundoreonectes tiomanensis 'Nemacheilus" xianggensis Oreonectes anophthalmus 'Nemacheilus" starostini 'Nemacheilus" smithi Schistura jarutanini Schistura sijuensis Schistura oedipus

Family Catostomidae

Catostomus bernardini

Catostomus catostomus lacustris Catostomus clarki intermedius Catostomus dicobolus yarrowi atostomus conchos Catostomus cahita

Catostomus occidentalis lacusanserinus Satostomus leopoldi Catostomus microps

Catostomus rimiculus ssp. Catostomus santaanae Catostomus sp.

Catostomus warnerensis Catostomus wigginsi

Chasmistes brevirostris Chasmistes cujus

Chasmistes liorus mictus Chasmistes liorus liorus Chasmistes muriei

Cycleptus elongatus

Deltistes luxatus

lasper Longnose Sucker Zuni Bluehead Sucker Matalote del Bavispe enny Creek Sucker White River Sucker Goose Lake Sucker Santa Ana Sucker Matalote Conchos Shortnose Sucker Matalote Cahita Matalote Opata Warner Sucker Modoc Sucker Salish Sucker Yaqui Sucker Cui-ui

Malaysia

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Thailand Thailand

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J.S.S.R.

China China Mexico, U.S.A. Mexico Canada

Mexico U.S.A. U.S.A.

Mexico U.S.A.

U.S.A.

U.S.A.

Canada U.S.A.

Mexico U.S.A.

[U.S.A.] U.S.A.

U.S.A.] J.S.A.

Snake River Sucker

June Sucker June Sucker Jost River Sucker

Blue Sucker

Mexico, U.S.A.

ucker Ex [U.S.A.] hucker R U.S.A. horse R W.S.A. Sucker R U.S.A. edhorse V Canada edhorse V U.S.A. t Sucker E [Mexico], U.S.A.	iega R Mexico E Brazil aracin V Argentina	Tollo de Agua Dulce E Chile	a a	Sienegas R. E. E. V.
Lagochila laceraHarelip SuckerMoxostoma ariomnumBigeye JumprockMoxostoma atripinneBlackfin SuckerMoxostoma congestumGray RedhorseMoxostoma hamiltoniRustyside SuckerMoxostoma hubbsiCopper RedhorseMoxostoma sp.Bighead RedhorseKyrauchen texanusRazorback Sucker	Order CHARACIFORMES Family Characidae Astyanax mexicanus jordani Catabasis acuminatus Gymnocharacinus bergi	Order SILURIFORMES Family Diplomystidae Diplomystes chilensis Tollo de A	Family Ictaluridae Ictalurus australis Ictalurus lupus Ictalurus mexicanus Bagre de Rio Vere	nnis i: rri ts us

E U.S.A. E U.S.A. E Mexico V U.S.A. V U.S.A.	E South Africa R South Africa R South Africa E Japan	V Mekong Basin R Mekong Basin	I Thailand	E Namibia R India	V South Africa	V Mexico
Pygmy Madtom Caddo Madtom Scioto Madtom Bagre de Muzquiz Widemouth Blindcat Toothless Blindcat	Barnard's Rock-catfish Clanwilliam Rock-catfish Rock-catfish Nekogigi	Giant Catfish Pla Thepa		Cave Catfish Cave Catfish	Incomati Rock Catlet	Juil Ciego
oturus stanauli oturus taylori oturus trautmani rietella phreatophila atan eurystomus rogloglanis pattersoni	Family Bagridae ustroglanis barnardi ustroglanis gilli ustroglanis sclateri oreobagrus ichikawai	Family Pangasiidae angasianodon gigas angasius sanitwongsei	Family Sisoridae reoglanis siamensis	Family Clariidae larias cavernicola oraglanis krishnai	Family Mochokidae hiloglanis bifurcus	Family Pimelodidae hamdia reddelli

Pangasius sanitwongsei

Pangasianodon gigas

Oreoglanis siamensis

Horaglanis krishnai Clarias cavernicola

Chiloglanis bifurcus

Rhamdia reddelli

Coreobagrus ichikawai

Austroglanis gilli Austroglanis sclateri

Trogloglanis pattersoni

Prietella phreatophila

Satan eurystomus

Noturus trautmani

Noturus stanauli Noturus taylori Austroglanis barnardi

Order SALMONIFORMES

Family Umbridae Novumbra hubbsi

Family Osmeridae

Hypomesus transpacificus Osmerus spectrum

Family Retropinnidae

Prototroctes maraena Prototroctes oxyrhynchus

Family Galaxiidae

Galaxias fontanus Galaxias johnstoni Galaxias purvus Galaxias pedderensis Galaxias tanycephalus Neochanna burrowsius Neochanna diversus

Family Salmonidae

Coregonus alpenae
Coregonus artedii
Coregonus canadensis
Coregonus hoyi
Coregonus johannae
Coregonus kiyi
Coregonus nigripinnis
Coregonus nigripinnis
Coregonus reighardi

Olympic Mudminnow

Delta Smelt Pygmy Smelt Australian Grayling New Zealand Grayling

Swan Galaxias Clarence Galaxias Small Pedder Galaxias Pedder Galaxias Saddled Galaxias

Canterbury Mudfish Black Mudfish

Longiaw Cisco Cisco Atlantic Whitefish Bloater Deepwater Cisco Kiyi

raya Blackfin Cisco Houting

Shortnose Cisco

R U.S.A.

V U.S.A. R Canada, U.S.A. V Australia, Tasmania Ex [New Zealand]

E Tasmania

E Tasmania V Tasmania

V Tasmania V Tasmania

R New Zealand
I New Zealand

Ex [Great Lakes (North America)]

R Great Lakes (North America)
E Great Lakes (North America)
B Great I along (North America)

Ex [Great Lakes (North America)]

V Great Lakes (North America)

Ex [Great Lakes (North America)]

North and Baltic Sea Great Lakes (North America)

E Canada V Canada E Great Lakes (North America) E Danube Basin V U.S.A. V Mexico V U.S.A. V U.S.A. R Mexico E Turkey E Yugoslavia Ex [U.S.A.] R U.S.A. V U.S.A.	V U.S.A. V U.S.A. E U.S.A.	E Mexico E Mexico E Namibia
Opeongo Whitefish Squanga Whitefish Shortjaw Cisco Danube Salmon Apache Trout Mexican Golden Trout Cutthroat Trout Gila Trout Trucha de Yaqui Ala Balik Adriatic Salmon Silver Trout Angayukaksurak Char Bull Trout Beloribitsa	Ozark Cavefish Northern Cavefish Alabama Cavefish	Dama Ciega Blanca Nueva Dama Ciega Caprivi Killifish
ospecies)	ES ES	TIFORMES

Stenodus leucichthys leucichi

Salvelinus anaktuvukensis

Salvelinus agassizi

Salvelinus confluentus

Salmothymus obtusirostris

Salmo platycephalus

Order PERCOPSIFOR Family Amblyopsidae Order OPHIDIIFORM

Family Ophidiidae

Typhliasina pearsei Typhliasina sp.

Speoplatyrhinus poulsoni

Amblyopsis spelaea

Amblyopsis rosae

Order CYPRINODON' Family Aplocheilidae

Nothobranchius sp.

Onchorhynchus chrysogaster Onchorhynchus clarki (sub

Onchorhynchus gilae

Onchorhynchus sp.

Onchorhynchus apache

Coregonus zenithicus

Hucho hucho

Coregonus sp.

R Brazil V Brazil E Brazil I Brazil E Brazil E Brazil R U.S.A. R Mexico		V Mexico Ex [U.S.A.] R Mexico Ex [U.S.A.] V U.S.A. V Mexico
Brasilia Lyrefin Ginger Pearlfish Minute Pearlfish Opalescent Pearlfish Splendid Pearlfish Rivulus Rivulus	Whiteline Topminnow Barrens Topminnow Killifish Waccamaw Killifish Sardinilla Cuatro Cienegas	Valencia Toothcarp Guayacon de San Gregorio Amistad Gambusia Guayacon Bocon Big Bend Gambusia San Marcos Gambusia Clear Creek Gambusia Guayacon de Hacienda Dolores Guayacon de Cuatro Cienegas Pecos Gambusia Guayacon Pinto
Family Rivulidae Cynolebias boitonei Cynolebias constanciae Cynolebias marmoratus Cynolebias minimus Cynolebias splendens Rivulus marmoratus Rivulus robustus	Family Fundulidae Fundulus albolineatus Fundulus julisia Fundulus lima Fundulus waccamensis Lucania interioris Family Valenciidae	Valencia hispanica Family Poeciliidae Gambusia alvarezi Gambusia eurystoma Gambusia gaigei Gambusia georgei Gambusia heterochir Gambusia hurtadoi Gambusia longispinis Gambusia nobilis Gambusia senilis

I Egypt V Mexico V Mexico R Mexico, U.S.A. Ex [Mexico] R Mexico E Mexico E Mexico E Mexico	E Mexico E Mexico V Mexico V U.S.A. V U.S.A. Ex [U.S.A.] Ex [U.S.A.] Ex [U.S.A.] Ex [U.S.A.] Ex [U.S.A.] Ex [Wexico E Mexico	E Brazil
Molly del Tamesi Molly del Teapa Charalito Guayacon Ojiazul Espada de Clemencia Platy Monterrey Platy Cuatro Cienegas Platy de Muzquiz	Opal Goodeid Goodeid Striped Goodeid Bold Characodon Parras Characodon Rainbow Goodeid White River Springfish Raycraft Ranch Poolfish Pahrump Poolfish Pahrump Ranch Poolfish Ash Meadows Killifish Ash Goodeido Tiro Solo Goodeido	Santa Catarina Sabrefin

Family Cyprinodontidae Campellolebias brucei

Xenoophorus captivus

Hubbsina turneri Skiffia francesae

Goodea gracilis

Characodon garmani

Ataeniobius toweri Characodon audax Characodon lateralis

Xiphophorus couchianus

Xiphophorus gordoni

Xiphophorus meyeri

Xiphophorus clemenciae

Priapella bonita

Poeciliopsis occidentalis

Family Goodeidae

Allotoca maculata Ameca splendens

Micropanchax schoelleri

Poecilia latipunctata Poecilia sulphuraria Crenichthys baileyi (subspecies)

Empetrichthys latos concavus

Crenichthys nevadae

Empetrichthys latos latos

Girardinichthys multiradiatus

Girardinichthys viviparus

Empetrichthys latos pahrump

Empetrichthys merriami

E Mexico R Mexico V Mexico R Mexico R U.S.A.	E U.S.A. V Mexico, U.S.A. E Mexico V Mexico Ex [Mexico] V Mexico	×	V Turkey E Mexico E Bolivia
Cachorrito de Media Luna Perrito de Potosi Perrito del Bolson Cachorrito Lodero Perrito de Cuatro Cienegas Leon Springs Pupfish Devils Hole Punfish	Comanche Springs Pupfish Conchos Pupfish Perrito de Carbonera Cachorrito Cangrejero Perrito de Parras	Largescale Pupfish Desert Pupfish Cachorrito Gigante Cachorrito de Mezquital Cachorrito del Aguanaval Amargosa Pupfish Cachorrito Cabezon Pecos Pupfish Owens Pupfish Cottonball Marsh Pupfish Salt Creek Pupfish Cachorrito Boxeador Perritos de Sandia White Sands Pupfish Cachorrito de Dorsal Larga	Scaleless Killifish Cachorrito Enano de Potosi
Cualac tessellatus Cyprinodon alvarezi Cyprinodon atrorus Cyprinodon beltrani Cyprinodon bifasciatus Cyprinodon diabolis	Cyprinodon elegans Cyprinodon eximius (subspecies) Cyprinodon fontinalis Cyprinodon labiosus Cyprinodon latifasciatus	Cyprinodon macrolepis Cyprinodon macularius (subspecies) Cyprinodon maya Cyprinodon nazas Cyprinodon nazas Cyprinodon pachycephalus Cyprinodon pecosensis Cyprinodon radiosus Cyprinodon salinus milleri Cyprinodon simus Cyprinodon simus Cyprinodon simus Cyprinodon simus Cyprinodon simus Cyprinodon pecosensis	Kosswigichthys asquamatus Megupsilon aporus Orestias cuvieri

SE	lae
CONTRORMES	Adrianichthyidae
LONI	Irianic
ler BEL	
Order	Family

Xenopoecilus sarasinorum Xenopoecilus oophorus Adrianichthys kruyti Xenopoecilus poptae

Family Oryziidae

Oryzias orthognathus Oryzias profundicola Oryzias marmoratus Oryzias matanensis Oryzias nigrimas

Family Hemiramphidae

Dermogenys megarramphus Nomoramphus celebensis Dermogenys weberi

Order ATHERINIFORMES

Family Atherinidae Menidia conchorum Chirostoma bartoni Poblana alchichica Poblana ferdebueni Poblana letholepis Poblana squamata Chirostoma regani Menidia extensa

Egg-carrying Buntingi Duck-billed Buntingi Popta's Buntingi

Sharp-jawed Buntingi Black Buntingi

Poso Halfbeak

Charal del Valle de Mexico Charal de la Caldera Key Silverside

Waccamaw Silverside Charal de Alchichica

Charal de la Preciosa Charal de Quechulac

Sulawesi (Indonesia) Sulawesi (Indonesia) Sulawesi (Indonesia) 国国国国

Sulawesi (Indonesia)

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Sulawesi (Indonesia)

Mexico Mexico

U.S.A.

Mexico Mexico Mexico Mexico

V Australia V Australia	I Malaysia	V Sulawesi (Indonesia) R Sulawesi (Indonesia)	E U.S.A. E U.S.A. V Canada V Canada	V South Africa V South Africa
Lake Eacham Rainbowfish Honey Blue-eye		Celebes Rainbow	Santa Ana Stickleback Unarmored Threespine Stickleback Giant Stickleback Enos Stickleback	Knysna Seahorse River Pipefish
Family Melanotaeniidae Melanotaenia eachamensis Pseudomugil mellis	Family Phallostethidae Phallostethus dunckeri	Family Telmatherinidae Paratherina cyanea Paratherina labiosa Paratherina striata Paratherina wolterecki Telmatherina abendanoni Telmatherina lonti Telmatherina celebensis Telmatherina celebensis	Order GASTEROSTEIFORMES Family Gasterosteidae Gasterosteus aculeatus santaeannae Gasterosteus aculeatus williamsoni Gasterosteus sp. Gasterosteus sp.	Order SYNGNATHIFORMES Family Syngnathidae Hippocampus capensis Syngnathus watermayeri

Order SCORPAENIFORMES
Family Cottidae

Cottus asperrimus Cottus echinatus Cottus extensus Cottus greenei Cottus leiopomus

Cottus princeps Cottus pygmaeus Cottus tenuis

Myoxocephalus quadricornis

Order PERCIFORMES Family Percichthyidae

Maccullochella ikei Maccullochella macquariensis Maccullochella sp.

Family Centrarchidae Ambloplites cavifrons Elassoma boehlkei Elassoma okatie

Elassoma sp.
Lepomis megalotis spp.
Micropterus notius
Micropterus salmoides ssp.

Blind Cave Eel Anguila Ciega	- 🖾	Austra Mexico
Rough Sculpin Utah Lake Sculpin	24 图	U.S.A. [U.S.A
Bear Lake Sculpin Shoshone Sculpin	~ >	U.S.A.
Wood River Sculpin Klamath Lake Sculpin	R R	U.S.A.
Pygmy Sculpin Slender Sculpin	田民	U.S.A. U.S.A.
Fourhorn Sculpin	>	Canada

Eastern Freshwater Cod Trout Cod Mary River Cod

Roanoke Bass
Carolina Pygmy Sunfish
Bluebarred Pygmy Sunfish
Spring Pygmy Sunfish
Mojarra de Cuatro Cienegas
Suwannee Bass
Robalo de Cuatro Cienegas

E Australia
I Australia
I Australia
R U.S.A.
R U.S.A.
R U.S.A.
R U.S.A.
R Mexico
R U.S.A.
R Mexico

R U.S.A.	R U.S.A.	V Canada, U.S.A.	R U.S.A.	V U.S.A.	E Mexico	V U.S.A.	R U.S.A.	R U.S.A.	V U.S.A.	E U.S.A.	R Mexico, U.S.A.	R U.S.A.	R U.S.A.	R U.S.A.	R U.S.A.	V U.S.A.	V U.S.A.	E U.S.A.	V U.S.A.	R U.S.A.	V U.S.A.	V Mexico	V U.S.A.		E Mexico	R U.S.A.	V U.S.A.	V U.S.A.	V U.S.A.
Guadalupe Bass	Crystal Darter	Eastern Sand Darter	Sharphead Darter	Coppercheek Darter	Dardo de Conchos	Slackwater Darter	Ashy Darter	Arkansas Darter	Coldwater Darter	Fountain Darter	Rio Grande Darter	Kanawha Darter	Redband Darter	Spotted Darter	Pinewoods Darter	Yellowcheek Darter	Niangua Darter	Watercress Darter	Okaloosa Darter	Finescale Saddled Darter	Paleback Darter	Mexican Darter	Bayou Darter	Maryland Darter	Dardo de Cuatro Cienegas	Striated Darter	Trispot Darter	Tuscumbia Darter	Boulder Darter
Micropterus treculi	Family Percidae Ammocrypta asprella	Ammocrypta pellucida	Etheostoma acuticeps	Etheostoma aquali	Etheostoma australe	Etheostoma boschungi	Etheostoma cinereum	Etheostoma cragini	Etheostoma ditrema	Etheostoma fonticola	Etheostoma grahami	Etheostoma kanawhae	Etheostoma luteovinctum	Etheostoma maculatum	Etheostoma mariae	Etheostoma moorei	Etheostoma nianguae	Etheostoma nuchale	Etheostoma okaloosae	Etheostoma osburni	Etheostoma pallididorsum	Etheostoma pottsi	Etheostoma rubrum	Etheostoma sellare	Etheostoma sp.	Etheostoma striatulum	Etheostoma trisella	Etheostoma tuscumbia	Etheostoma wapiti

R U.S.S.R. E U.S.A. R U.S.A. R U.S.A. V U.S.A. V U.S.A. V U.S.A. V U.S.A. V U.S.A. V U.S.A. E U.S.A. E Romania E Rhone Basin V Danube Basin	E Mexico E Mexico E Mexico E Mexico R Mexico E Mexico E Mexico C Mexico C Mexico C Mexico C C C C Mexico C C C C C C C C C C C C C C C C C C C
Balkhash Perch Amber Darter Goldline Darter Blotchside Logperch Bluestripe Darter Conasauga Logperch Freckled Darter Longhead Darter Longnose Darter Longnose Darter Longnose Darter Sanail Darter Roanoke Logperch Shail Darter Asprete Asprete Asprete	Totoaba Orange-fringed Largemouth Mojarra Caracolera Mojarra Caracolera de Cuatro Cienegas Mojarra Mojarra Mojarra Mojarra Mojarra Konye
Perca schrenki Percina antesella Percina aurolineata Percina burtoni Percina jenkinsi Percina jenkinsi Percina lenticula Percina macrocephala Percina masuta Percina nasuta Percina tanasi Percina tanasi Percina uranidea Romanichthys valsanicola Zingel asper	Family Sciaenidae Totoaba macdonaldi Family Cichlidae Astatotilapia brevis Cichlasoma bartoni Cichlasoma labridens Cichlasoma minckleyi Cichlasoma pantostictum Cichlasoma sp. Cichlasoma steindachneri Cichlasoma urophtalmus ericymba Konia dikume

V Cameroon R Kenya V Cameroon Cameroon E South Africa V Cameroon V Cameroon V Cameroon E East Africa E East Africa	R U.S.A. R South Africa R U.S.A. R South Africa V Australia	R U.S.A. V Australia I South Africa R Greece R U.S.A. V Sulawesi (Indonesia)
Myaka myaka Lake Magadi Tilapia Pungu Fissi Unga Leka Keppe Kululu Lowveld Largemouth Nsess Mongo Pindu Otjikoto Tilapia Lake Victoria Cichlids Lake Victoria Cichlids	Russian River Tule Perch Freshwater Mullet Oopu Golden Sleeper Flinders Gudgeon	Oopu Nakea Elizabeth Springs Goby Burrowing Goby Tidewater Goby
Myaka myaka Oreochromis alcalicus grahami Pungu maclareni Sarotherodon caroli Sarotherodon linnellii Sarotherodon steinbachi Sarotherodon steinbachi Serranochromis meridianus Stomatepia mariae Stomatepia mongo Stomatepia pindu Tilapia guinasana haplochromine spp. (c. 250 spp.)	Family Embiotocidae Hysterocarpus traski pomo Family Mugilidae Myxus capensis Family Eleotrididae Eleotris sandwicensis Hypseleotris dayi Mogurnda n.sp.	Family Gobiidae Awaous stamineus Chlamydogobius n.sp. Croilia mossambica Economidichthys trichonis Eucyclogobius newberryi Glossogobius intermedius

		>	Sulawesi (Indonesia)
ma		24	Greece
		臼	Greece
	Oopu Alamoo	>	U.S.A.
	Sinarapan	>	Philippines
		>	Sulawesi (Indonesia)
		>	Sulawesi (Indonesia)
		>	Greece
	Checked Goby	ద	Mozambique, South Africa
	Oopu Nopili	跘	U.S.A.
	Sibayi Goby	出	South Africa
		>	Sulawesi (Indonesia)
	Bearded Goby	>	South Africa
	Sarasin's Goby	>	Sulawesi (Indonesia)
	Poso Bungu	臼	Sulawesi (Indonesia)
an.	Eastern Province Bocky	>	South Africa
	Combtail	R	Sri Lanka
	Ornate Paradisefish	>	Sri Lanka

Knipowitschia punctatissin

Knipowitschia thessala

Lentipes concolor

Mistichthys luzonensis Mugilogobius latifrons

Padogobius nigricans

Mugilogobius n.sp.

Redigobius dewaali

Sicydium stimpsoni

Silhouettea sibayi

Glossogobius matanensis

Family Anabantidae

Sandelia bainsii

Family Belontiidae

Malpulutta kretseri

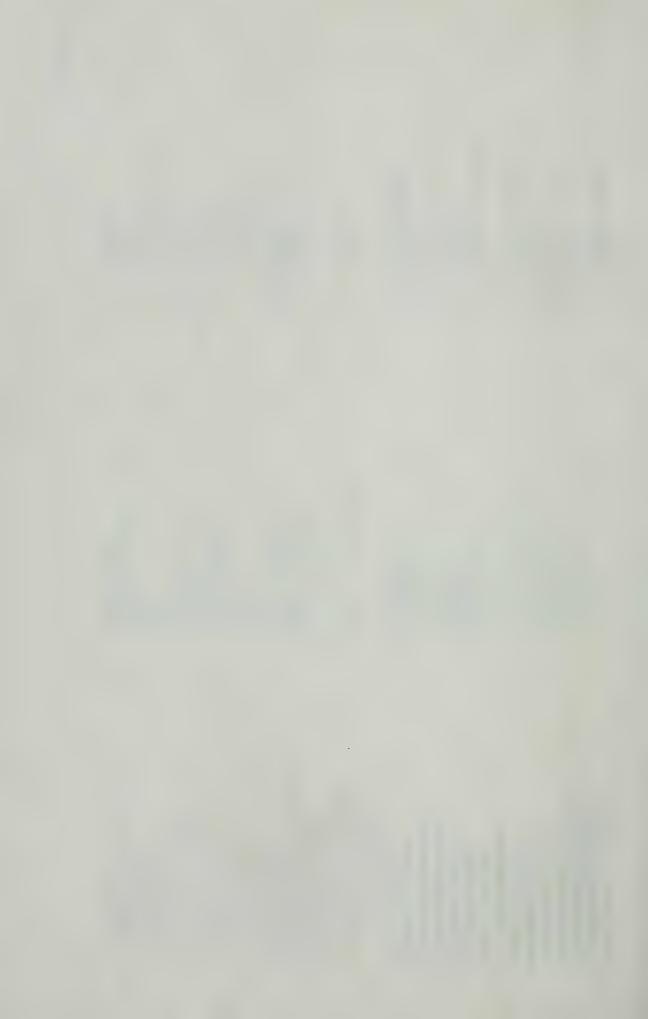
Belontia signata

Stupidogobius flavipinnis

Tamanka sarasinorum

Taenioides jacksoni

Weberogobius amadi



INVERTEBRATES Other than Insects

Phylum CILIOPHORA

Class POLYHYMENOPHOREA

Stentor introversus

Order GORGONACEA Family Plexauridae Eunicella verrucosa Order HELIPORACEA Family Coralliidae Corallium (20 species)

Family Edwardsiidae Order ACTINARIA Nematostella vectensis Edwardsia ivellii

Anthipathidae (c 150 species) Order ANTIPATHARIA Family Anthipathidae

Class TURBELLARIA

Romankenkius pedderensis Order TRICLADIDA Sphalloplana holsingeri Family Kenkiidae Sphalloplana subtilis Kenkia rhynchida

Phylum CNIDARIA Tartar's Stentor

U.S.A.

M

Broad Sea Fan

Mediterranean Sea, N.E. Atlantic Ocean

M

Mediterranean Sea, Pacific Ocean

G

Precious Corals

Starlet Sea Anemone Ivell's Sea Anemone

Black Coral

Caribbean, Indo-Pacific CJ

U.K. U.K., North America

Ex;

Phylum PLATYHELMINTHES

Holsinger's Groundwater Planarian Bigger's Groundwater Planarian Malheur Cave Planarian Lake Pedder Planarian

Tasmania U.S.A. U.S.A. U.S.A. 。 版图图

Class ENOPLA

Order HOPLONEMERTEA Katechonemertes nightingaleensis Family Prosorhochmidae Leptonemertes chalicophora Argonemertes australiensis Pantinonemertes agricola Antiponemertes allisonae Geonemertes rodericana Argonemertes stocki Argonemertes hillii

Phylum MOLLUSCA

Madeira, Azores, Canary Is (Spain)

Bermuda

Australia Australia

Tristan da Cunha

民民民民民民民民民

Rodrigues

New Zealand

Australia Australia Australia

MATA	lae	
Order GYMNOSOMATA	Family Corambidae	Doridella batava
Ō	F	Dorid

Class BIVALVIA

Order PTERIOIDA Family Pteriidae Pinctada margaritifera Pinctada maxima
--

Black-lipped Pearl Oyster Gold-lipped Pearl Oyster

Netherlands M

Zuiderzee Doridella Sea Slug

Indo-Pacific Indo-Pacific 55

Pantinonemertes enalios Pantinonemertes winsori

Order UNIONOIDA

Dwarf Wedge Mussel	Wheeler's Pearly Mussel	James River Spiny Mussel Georgia Spiny Mussel	Savannah Shore Mussel Birdwing Pearly Mussel Western Fan-shell Pearly Mussel	Eastern Fan-shell Pearly Mussel Tampico Pearly Mussel	Dromedary Pearly Mussel	Cape Fear Spike Pearly Mussel Recovery Pearly Mussel	Waccamaw Lake Pearly Mussel Georgia Spiny Mussel	Tar River Spiny Mussel Waccamaw Spike	Arc-form Pearly Mussell		Arcuate Pearly Mussel Curtis Pearly Mussel Yellow-blossom Pearly Mussel
Family Unionidae Alasmidonta arcula Alasmidonta atropurpurea Alasmidonta heterodon Alasmidonta raveneliana	Alasmidonta robusta Alasmidonta wrightiana Arkansia wheeleri	Canthyria collina Canthyria spinosa	Carunculina pulla Conradilla caelata Compagnia aberti	Opprogenia irrorata Cyprogenia irrorata Cymponics faminosensis foromatensis	Dromus dromas	Elliptio marsupiobesa Elliptio nigella	Elliptio sp. Elliptio spinosa	Elliptio steinstansana Elliptio waccamawensis	Epioblasma arcaeformis	Epioblasma biemarginata Epioblasma brevidens Epioblasma capsæformis	Epioblasma curhsi Epioblasma flexuosa Epioblasma florentina curtisi Epioblasma florentina florentina

U.S.A. U.

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Lasmigona holstonia		I U.S.A.	
Leptodea leptodon	Scale Shell	I U.S.A.	
Lexingtonia dolabelloides	Slab-sided Pearly Mussel	I U.S.A.	
Megalonaias nicklineana	Nicklin's Pearly Mussel	E Mexico	
Microcondylaea compressa		I Southern Europe	٥
Obovaria retusa	Golf Stick Pearly Mussel	I U.S.A.	
Pegias fabula	Little Winged Pearly Mussel	E U.S.A.	
Plectomeris dombeyana		Ex [U.S.A.]	
Plethobasus cicatricosus	White Warty Back Pearly Mussel	E U.S.A.	
Plethobasus cooperianus	Cumberland Pigtoe		
Pleurobema clava	Northern Club Shell	I U.S.A.	
Pleurobema curtum	Curtus's Mussel	E U.S.A.	
Pleurobema marshalli	Marshall's Mussel	E U.S.A.	
Pleurobema oviforme		I U.S.A.	
Pleurobema plenum	Rough Pigtoe Pearly Mussel	E U.S.A.	
Pleurobema rubrum		I U.S.A.	
Pleurobema taitianum	Judge Tait's Mussel	E U.S.A.	
Potamilus capax	Fat Pocketbook	E U.S.A.	
Potamilus inflatus		I U.S.A.	
Quadrula cylindrica strigillata	Rough Rabbit's Foot Pearly Mussel	I U.S.A.	
Quadrula fragosa	Rough Maple Leaf Pearly Mussel	Ex [U.S.A.]	
Quadrula intermedia	Cumberland Monkey Face Pearly Mussel	E U.S.A.	
Quadrula sparsa	Appalachian Monkey Face Pearly Mussel	E U.S.A.	
Quadrula stapes	Stirrup Shell	E U.S.A.	
Simponaia ambigua		I U.S.A.	
Simpsoniconcha ambigua	Salamander Mussel	I U.S.A.	
Toxolasma cylindrella	Pale Lilliput Pearly Mussel	E U.S.A.	
Unio crassus		V Central & Northern E	ern E
Unio elongatulus		I Southern Europe	٥
Villosa choctawensis	Choctaw Pearly Mussel	I U.S.A.	
Villosa fabalis	Bean Mussel	I U.S.A.	
Villosa ortmanni	Ortmann's Pearly Mussel	R U.S.A.	

I U.S.A. E U.S.A.	I U.S.A. V Catalonia (Spain) V Europe, North America I U.S.A.	I Indo-Pacific I Indo-Pacific K Indo-Pacific V Indo-Pacific V Indo-Pacific K Indo-Pacific I Indo-Pacific	U.S.A. Tasmania	CT Indo-Pacific I Hawaii (U.S.A.)
Fine-rayed Purple Pearly Mussel Cumberland Bean Pearly Mussel	Spectacle Case Pearly Mussel Spengler's Freshwater Mussel Freshwater Pearl Mussel Alabama Pearl Shell	Horse's Hoof Clam China Clam Crocus Clam Southern Giant Clam Giant Clam Small Giant Clam Scaly Clam	I	Green Snail
Villosa purpurea Villosa trabalis	Family Margaritiferidae Cumberlandia monodonta Margaritifera auricularia Margaritifera margaritifera Margaritifera marrianae	Order VENEROIDA Family Tridacnidae Hippopus hippopus Hippopus porcellanus Tridacna crocea Tridacna derasa Tridacna gigas Tridacna maxima Tridacna squamosa	Family Pisidiidae Pisidium ultramontanum Family Hyriidae Velesunio moretonicus Class GASTROPODA	Order ARCHAEOGASTROPODA Family Turbinidae Turbo marmoratus Family Neritidae Neritilia hawaiiensis

Order MESOGASTROPODA Family Valvatidae Valvata utahensis

Family Pomatiasidae

Pomatias raricosta

Family Hydrobiidae phaostracon xynoelictus Aphaostracon asthenes Aphaostracon monas Aphaostracon pycnus Amnicola deserta

Belgrandiella pyrenaica Bythinella bicarinata Avenionia brevis Arganiella exilis

Bythiospeum diaphanum Bythiospeum bressanum Cincinnatia monroensis Cincinnatia helicogyra Bythiospeum articense Bythinella vesontiana Bythiospeum garnieri Bythinella carinulata Bythinella pupoides Bythinella reyniesii Bythinella viridis Cincinnatia mica

Utah Roundmouth Snail

Tenerife (Canary Is, Spain)

>

U.S.A.

Wekiwa Springs Aphaostracon Blue Spring Aphaostracon Compact Hydrobe Snail St George Snail

Fenney's Spring Hydrobe Snail

France, Switzerland France, Switzerland Austria, France France France France France France France France

Belgium, France, Netherlands

France

U.S.A.

U.S.A. U.S.A. U.S.A. France U.S.A. U.S.A. U.S.A. U.S.A.

Ponderous Spring Snail

Cincinnatia ponderosa

Cincinnatia parva

Enterprise Spring Snail

Helicoid Spring Snail Sand Grain Snail

I U.S.A. I U.S.A. V Mexico I U.S.A. V Mexico I Tasmania	V Mexico I France	I U.S.A. I U.S.A. I U.S.A.		Ex? U.S.A. I U.S.A. I U.S.A.	V U.S.A. I U.S.A. I Tasmania I Tasmania	I France, Switzerland I France E U.S.A. I France I U.S.A.	I U.S.A. I U.S.A. V Mexico V Mexico
Seminole Spring Snail Wekiwa Spring Snail Coahuilix de Hubbs Snail Phantom Cave Snail Miller's Snail	Durangonella de Coahuila Snail	Muddy Valley Turban Snail Point of Rocks Spring Snail Pahranagat Valley Turban Snail Elk Island Snail	Amargosa Fontelicella	Socorro Spring Snail	Roswell Fontelicella	Giant Columbia River Spire Snail	Obese Marstonia Snail Thick-shelled Marstonia Snail Mexipyrgus de Carranza Snail Mexipyrgus de Churince Snail Mexipyrgus de Escobeda Snail
Cincinnatia vanhyningi Cincinnatia wekiwae Coahuilix hubbsi Cochliopa texana Cochliopina milleri	Durangonella coahuilae Fissurio boui	Fluminicola avernalis Fluminicola erythopoma Fluminicola merriami	Fluminicola sp. (3 species) Fontelicella micrococcus	Fontelicella neomexicana Fontelicella robusta Fontelicella robusta walkeri	Fontelicella sp. a Fontelicella sp. b (2 species) Glacidorbis pawpela Glacidorbis pedderi	Hauffenia minuta Hydrobia scamandri Lithoglyphus columbiana Litthabitella elliptica Marstonia agarhecta	Marstonia ogmoraphe Marstonia pachyta Mexipyrgus carranzae Mexipyrgus churinceanus Mexipyrgus escobedae

V Mexico	V Mexico		V Mexico	I France	V Mexico	I France	I France	I France	V Mexico	I France	I France	I France	I U.S.A.	I U.S.A.	I U.S.A.	I U.S.A.	I U.S.A.	V U.S.A.										
Meximurous de Lugo Spail	Meximum de West El Moiarral Snail	Mexiporgus de East El Mojarral Snail	Mexithauma de Cienegas Snail								Nymphophilus de Minckley Snail	4 4			Paludiscala de Oro Snail								Cheatum's Snail	White River Snail	California Brackish Water Snail		Badwater Snail	Pecos Assiminea Snail

Valacanthilhiopsis vervierii

Vymphophilus minckleyi

Moitessieria rolandiana Moitessieria simoniana

Moitessieria puteana

Moitessieria rayi

Moitessieria locardi

paladilhiopis bourgignati

Paludiscala caramba

Plagigeyeria conilis

Paladilhia pleurotoma

Pseudamnicola anteisensis

Pseudamnicola klemmi Somatogyrus catanotus

Somatogyrus parvulus

Somatogyrus tenax

Stiobia nana

Tryonia cheatumi Tryonia clathrata Family Assimineidae

Assiminea infirma

Assiminea sp.

Tryonia n.sp. (6 species)

Tryonia imitator

Mexithauma quadripaludium

Mexipyrgus multilineatus

Mexipyrgus mojarralis

Mexipyrgus lugoi

Moitessieria juvenisanguis

Moitessieria lineolata

France France France France France

Family Pleuroceridae Apella alabamensis Apella babylonia Athearni anthonyi Athearni crassa Elimia albanyensis Goniobasis albanyensis	Io arwigera arwigera Io fluvialis Leptoxis crassa Leptoxis praerosa Leptoxis subumbilicata Lithasia armigera	Lithasia duttoniana Lithasia geniculata Lithasia jayana Lithasia lima Lithasia salebrosa Lithasia verrucosa
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Family Strombidae Strombus gigas

Alabama Coosa Slit-shell Babylon Coosa Slit-shell Anthony's River Snail Crass River Snail	Albany River Snail	Spiny River Snail	Mainstream River Snail	Armigerous River Snail Dutton's River Snail	Geniculate River Snail Jay's River Snail	Elk River File Snail Rugged River Snail Verrucose File Snail
ramny Frencocriuae ella alabamensis ella babylonia hearni anthonyi	ımıa albanyensis nniobasis albanyensis	drwigerd drwigerd fluvialis ploxis crassa	ptoxis praerosa ptoxis subumbilicata	thasia armigera thasia duttoniana	thasia geniculata thasia jayana	thasia lima thasia salebrosa thasia verrucosa

Ex [U.S.A.] Ex [II.S.A.]	_	I U.S.A.	I U.S.A.	I U.S.A.	E U.S.A.	V U.S.A.	I U.S.A.	Ex [U.S.A.]	I U.S.A.	I U.S.A.	I U.S.A.	I U.S.A.	E U.S.A.	E U.S.A.	E U.S.A.	I U.S.A.		CT Caribbean
Alabama Coosa Slit-shell	Anthony's River Snail	Crass River Snail		Albany River Snail		Spiny River Snail	3 4	Mainstream River Snail		Armigerous River Snail	Dutton's River Snail	Geniculate River Snail	Jav's River Snail	Elk River File Snail	Rugged River Snail	Verricose File Snail		Queen Conch

Partulina confusa
Partulina crassa
Partulina fusoidea
Partulina montagui
Partulina serdix
Partulina splendida

Family Partulidae

Samoana abbreviata Samoana diaphana Samoana solitaria Partula mooreana Partula tohiveana Samoana fragilis Partula langfordi Partula mirabilis Partula radiolata Partula suturalis Partula aurantia Partula salifana Partula taeniata Partula exigua Partula gibba Partula hebe

Family Cochlicopidae

Cryptazeca monodonta Cryptazeca subcylindrica Hypnophila remyi

Moorean Viviparous Tree Snail Moorean Viviparous Tree Snail Tree Snail Moorean Viviparous Tree Snail
Moorean Viviparous Tree Snail
Tree Snail
Tree Snail
Moorean Viviparous Tree Snail
Moorean Viviparous Tree Snail
Moorean Viviparous Tree Snail
Short Samoan Tree Snail
Moorean Viviparous Tree Snail
Tree Snail
Moorean Viviparous Tree Snail

Hawaii (U.S.A.)]

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I American Samoa

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E Guam (U.S.A.)

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I Pyrenees (France & Spain)
I France

Corsica (France)

Family Amastridae	relia (all species)	haanumia sp.
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Family Chondrinidae

Chondrina megacheilos caziotana Leiostyla corneocostata Solatopupa psarolena Solatopupa cianensis Leiostyla abbreviata Solatopupa guidoni Leiostyla lamellosa Sterkia clementina Leiostyla cassida Leiostyla gibba

Family Vertiginidae

Truncatellina arcyensis Vertigo alabamensis Vertigo moulinsiana Vertigo angustior Vertigo hebardi Vertigo genesii Vertigo geyeri

Family Enidae

Napaeus tarnerianus Napaeus propinguus Napaeus roccellicola Napaeus badiosus Napaeus nanodes

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Madeiran Land Snail				
Mac	Mac	Mac	Mac	Mac

San Clemente Island Blunt-top Snail

Narrow-mouthed Whorl Snail Round-mouthed Whorl Snail

Des Moulin's Snail

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Tenerife (Canary Is, Spain) Tenerife (Canary Is, Spain) Tenerife (Canary Is, Spain) Tenerife (Canary Is, Spain)

V Tenerife (Canary Is, Spain)	V Europe I France I France	V Europe I U.S.A. V U.S.A.	V South Africa	V New Zealand	E Tasmania	E Galapagos Is (Ecuador)V U.S.A.V New Zealand
	Tree Snail	Sandbowl Snail Kanab Amber Snail Chittenango Ovate Amber Snail	Plant's Gulella Snail	Kauri Amber Snail	Granulated Tasmanian Snail	Stock Island Tree Snail
Napaeus variatus	Family Clausiliidae Balea perversa Laminifera pauli Macrogastra lineolata euzieriana	Family Succineidae Catinella arenaria Oxyloma haydeni kanabensis Succinea chittenangoensis	Family Streptaxidae Gulella plantii	Family Rhytididae Paryphanta busbyi Paryphanta compta Paryphanta fletcheri Paryphanta gilliesi Paryphanta hochstetteri Paryphanta lignaria Paryphanta traversi	Family Acavidae Anoglypta launcestonensis	Family Bulimulidae Bulimulus (31 endemic species) Orthalicus reses Placostylus ambagiosus

V New Zealand V New Zealand	V U.S.A. V Ireland, Spain, Portugal	V U.S.A. V Madeira (Portugal) V Madeira (Portugal) E U.S.A. I U.S.A. R Tenerife (Canary Is, Spain) I U.S.A. I U.S.A. E Western Samoa	V Tenerife (Canary Is, Spain) Ex [France] V Tenerife (Canary Is, Spain)	I American Samoa I U.S.A. I U.S.A. I France
Flax Snail	Slug Snail Kerry Slug	Painted Snake-coiled Forest Snail Madeiran Land Snail Iowa Pleistocene Snail		Mount Matafao Different Snail
Placostylus bollonsi Placostylus hongii	Family Arionidae Binneya notabilis Geomalacus maculosus	Family Endodontidae Anguispira picta Discus defloratus Discus guerinianus Discus macclintocki Discus marmorensis Discus scutula Helicodiscus diadema Helicodiscus hexodon Thaumatodon hystricelloides	Family Limacidae Malacolimax wiktori Family Parmacellidae Parmacella gervaisi Parmacella tenerifensis	Family Helicarionidae Diastole matafaoi Family Zonitidae Glyphyalinia pecki Paravitrea clappi Vitrea pseudotrolli

U.S.A.

Oreohelix avalonensis

R Tenerife (Canary Is, Spain) E Tenerife (Canary Is, Spain)	I U.S.A.	V U.S.A. I U.S.A.	I U.S.A. I U.S.A.	I U.S.A. I U.S.A.	I U.S.A.	I U.S.A.	I U.S.A.	I U.S.A. E U.S.A.	V U.S.A.	I U.S.A.	R Papua New Guinea	
	Archer's Toothed Land Snail	Noonday Snail Banded Mesodon	Clench's Middle-toothed Land Snail Jones' Middle-toothed Land Snail	Magazine Mountain Middle-toothed Snail	Strange Many-whorled Land Snail Virginia Fringed Mountain Snail		Pilsbry's Narrow-apertured Land Snail	Western Three-toothed Land Snail Flat-spired Three-toothed Snail	Karok Indian Snail	Yate's Snail	Manus Green Tree Snail	
Family Vitrinidae Insulivitrina mascaensis Insulivitrina reticulata	Family Polygyridae Ashmunella pasonis Mesodon archeri	Mesodon clarki nantahala Mesodon clausus trossulus	Mesodon clenchi Mesodon jonesianus	Mesodon magazinensis Polygyra hippocrepis	Polygyra peregrina Polygyriscus virginianus	Stenotrema leai cheatumi	Stenotrema pilsbryi Triodopsis mullani magnidentata	Triodopsis occidentalis Triodopsis platysayoides	Vespericola karokorum	Family Ammonitellidae Ammonitella yatesi	Family Camaenidae Papustyla pulcherrima	Family Oreohelicidae

V U.S.A. V U.S.A. V U.S.A. I U.S.A. R U.S.A. R U.S.A. I U.S.A. I U.S.A.	1 U.S.A. 1 U.S.A. 1 U.S.A. 1 U.S.A. 1 U.S.A.	I U.S.A. I U.S.A. I U.S.A. I U.S.A.	V U.S.A. I U.S.A. I U.S.A. I U.S.A.	1 U.S.A. 1 U.S.A. 1 U.S.A. 1 U.S.A.
Idaho Banded Mountain Snail Yoked Ended Banded Mountain Snail Vortex Banded Mountain Snail Coalville Mountain Snail Carinated Striate Banded Mntain Snail Vortex Banded Mountain Snail Walton's Banded Mountain Snail	Allyn Smith's Banded Snail Cape Mendocino Snail Dented Peninsula Snail	Nicklin's Peninsula Snail	Banded Dune Snail Concentrated Snail Fraternal Snail Gabb's Snail	Cathedral Snail Horseshoe Snail Colorado Desert Snail Prickly Pear Snail Wreathed Island Snail
Oreohelix idahoensis idahoensis Oreohelix jugalis intersum Oreohelix jugalis jugalis Oreohelix jugalis vortex Oreohelix peripherica weberiana Oreohelix strigosa goniogyra Oreohelix vortex Oreohelix waltoni	Family Helminthoglyptidae Helminthoglypta allynsmithi Helminthoglypta arrosa mattolensis Helminthoglypta arrosa miwoka Helminthoglypta arrosa pomoensis Helminthoglypta arrosa williamsi Helminthoglypta arrosa williamsi	Helminthoglypta monaveana Helminthoglypta nickliniana awania Helminthoglypta nickliniana bridgesi Helminthoglypta nickliniana contracosta Helminthoglypta sequoicola consors	Helminthoglypia trassi coetata Helminthoglypta walkeriana Micrarionta facta Micrarionta feralis	Micrarionta immaculata Micrarionta indiaensis cathedralis Micrarionta intercisa Micrarionta morongoana Micrarionta opuntia Micrarionta redimita

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нышыныны Жыны	
California McCoy Snail Rocky Coast Snail Indian Yosemite Snail Trinity Bristle Snail	Madeiran Land Snail Madeiran Land Snail Madeiran Land Snail Madeiran Land Snail Madeiran Land Snail Cima Discula Madeiran Land Snail Roman Snail
Micrarionta rowelli bakerensis Micrarionta rowelli mccoiana Monadenia circumcarinata Monadenia fidelis minor Monadenia fidelis pronotis Monadenia hillebrandi yosemitensis Monadenia morbritoni Monadenia mormonum buttoni Monadenia selosci Monadenia selosci Monadenia setosa Monadenia troglodytes Sonorella eremita	Family Hygromiidae Canariella fortunata Canariella leprosa Canariella pthonera Family Helicidae Caseolus calculus Caseolus commixta Caseolus sphaerula Cyrnotheba corsica Discula leacockiana Discula tabellata Discula turricula Geomitra moniziana Helix pomatia

V Madeira (Portugal) I U.S.A. V Tenerife (Canary Is, Spain) V Tenerife (Canary Is, Spain) E Tenerife (Canary Is, Spain) E Tenerife (Canary Is, Spain) E Tenerife (Canary Is, Spain) V Tenerife (Canary Is, Spain) V France I France I France R Tenerife (Canary Is, Spain)	R France, Spain		K Pacific		I Europe
Madeiran Land Snail	Escargot de Quimper	Phylum ANNELIDA	Palolo Worm		Medicinal leech
Helix subplicata Helix tryoni Hemicycla adansoni Hemicycla inutilis Hemicycla mascaensis Hemicycla modesta Hemicycla plicaria Hemicycla pouchet Macularia saintyvesi Trissexodon constrictus Xerotricha nubivaga	Family Elonidae Elona quimperiana	Class POLYCHAETA	Order EUNICIDA Family Eunicidae Eunice viridis	Class HIRUDINOIDEA	Order ARHYNCHOBDELLAE Family Hirudinidae Hirudo medicinalis

Class OLIGOCHAETA

	e	
'AXIDA	Family Komarekionidae	
Order HAPLOTAXIDA	Komare	" Patoni
Order F	Family	Komarekiona eaton
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Family Lutodrilidae Lutodrilus multivesiculatus Family Microchaetidae Microchaetus (33 species) Tritogenia (5 species)

Family Megascolecidae
Megascolides americanus
Megascolides australis
Megascolides macelfreshi

Family Acanthodrilidae Chilota (13 species) Diplotrema (16 species) Microscolex (9 species) Udeina (59 species)

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Earthworm		South African Giant Earthworm South African Giant Earthworm	Washington Giant Earthworm Giant Gippsland Earthworm Oregon Giant Earthworm	Southern African Acanthodriline Earthworms Southern African Acanthodriline Earthworms Southern African Acanthodriline Earthworms Southern African Acanthodriline Earthworms

Phylum ARTHROPODA Subphylum CHELICERATA

Class MEROSTOMATA

Order XIPHOSURA

Family Limulidae Carcinoscorpius rotundicauda Limulus polyphemus Tachypleus gigas Tachypleus tridentatus	Class ARACHNIDA	Order ARANEAE Family Theraphosidae Brachypelma smithi Red-l	Family Dipluridae Macrothele calpeiana Macrothele cretica	Family Ctenizidae Cyclocosmia torreya	Family Telemidae Telema (whole genus)	Family Eresidae Eresus niger Lady	Family Linyphiidae Troglohyphantes gracilis
Horseshoe Crabs		Red-kneed Tarantula		Torreya Trap-door Spider	Santa Cruz Teleman Spider	Ladybird Spider	Kocevje Subterranean Spider
K Coastal waters - Japan to Indonesia K Atlantic coast of North America K Coastal waters - Japan to Indonesia K Coastal waters - Japan to Indonesia		K Mexico	V Spain, Morocco I Crete (Greece)	I U.S.A.	I U.S.A.	I Europe	R Yugoslavia

R Yugoslavia R Yugoslavia	I U.S.A.	I Bahamas, U.S.A.	E U.S.A. R U.S.A. I U.S.A.	V Northern Europe	I U.S.A.	V U.S.A.
Kocevje Subterranean Spider Kocevje Subterranean Spider	Dolloff Cave Spider	Key Gnaphosid Spider	No-eyed Big-eyed Wolf Spider Rosemary Wolf Spider Glacier Bay Wolf Spider Lake Placid Funnel Wolf Spider	Great Raft Spider	Empire Cave Pseudoscorpion	Melones Cave Harvestman
Troglohyphantes similis Troglohyphantes spinipes	Family Araneidae Meta dolloff	Family Gnaphosidae Cesonia irvingi	Family Lycosidae Adelocosa anops Lycosa ericeticola Pardosa diuturna Sosippus placidus	Family Asauridae Dolomedes plantarius	Order PSEUDOSCORPIONIDA Family Neobisiidae Microcreagn's imperialis	Order OPILIONES Family Phalangodidae Banksula melones

Subphylum CRUSTACEA

lacustris	
Paranaspides	

Family Koonungidae Koonunga cursor Micraspides calmani

Family Psammaspidae Eucrenonaspides oinotheke

Order THORACICA Family Balanidae Armatobalanus nefrens Balanus aquila

Order ANOSTRACA Family Branchinectidae

Branchinecta gigas Branchinecta paludosa

Giant Fairy Shrimp Fairy Shrimp

Western North America Czechoslovakia

Tasmania Tasmania Tasmania Tasmania	Tasmania, Australia Tasmania	Tasmania	U.S.A. U.S.A.	
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Tasmanian Anaspid Crustacean Tasmanian Anaspid Crustacean Tasmanian Anaspid Crustacean Tasmanian Anaspid Crustacean Tasmanian Anaspid Crustacean				

Mexico

Socorro Isopod		Madison Cave Isopod	
Order ISOPODA Family Sphaeromatidae Thermosphaeroma milleri Thermosphaeroma smithi Thermosphaeroma subequalum Thermosphaeroma thermophilum	Family Trichoniscidae Metatrichoniscoides celticus	Family Cirolanidae Antrolana lira Arubolana imula Mexilana saluposi Speocirolana affinis Speocirolana interstitialis Speocirolana thermydromis	Family Armadillidae Echinodillo cavaticus

Netherlands

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Tasmania	U.S.A. U.S.A. U.S.A. U.S.A.
I	
	Clifton Cave Isopod Bat Cave Isopod Nickajack Cave Isopod Rye Cove Cave Isopod Lee County Cave Isopod

Family Stenasellidae	Mexistenasellus coahuila

Caecidotea macropoda Caecidotea nickajackensis

Lirceus usdagalun

Lirceus culveri

Family Asellidae

Caecidotea barri

R Mexico R Mexico	I Tasmania	I Tasmania	I Tasmania I Tasmania I Tasmania I Tasmania	1 U.S.A. 2 U.S.A. 3 U.S.A. 4 U.S.A. 2 U.S.A. 3 U.S.A.
Parzefall's Stenasellid Wilken's Stenasellid				Central Missouri Cave Amphipod Oklahoma Cave Amphipod Pennsylvania Cave Amphipod Florida Cave Amphipod Hobb's Cave Amphipod Tidewater Interstitial Amphipod Arizona Cave Amphipod Balcones Cave Amphipod Barr's Cave Amphipod Bifurcated Cave Amphipod Bowman's Cave Amphipod Clanton's Cave Amphipod Burnsville Cove Cave Amphipod Cascade Cave Amphipod Cascade Cave Amphipod
Mexistenasellus parzefalli Mexistenasellus wilkensi	Family Styloniscidae Styloniscus sp.	Family Scyphacidae Haloniscus searlei	Family Phreatoicidae Mesacanthotelson setosis Onchotelson brevicaudatus Onchotelson spatulatus Uramphisopus pearsoni	Order AMPHIPODA Family Crangonyctidae Allocrangonyx hubrichti Allocrangonyx pellucidus Crangonyx grandimanus Crangonyx grandimanus Crangonyx hobbsi Stygobromus arizonensis Stygobromus balconius Stygobromus barri Stygobromus bowmani Stygobromus clantoni Stygobromus clantoni Stygobromus cooperi Stygobromus cooperi

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Elevated Spring Amphipod Greenbrier Cave Amphipod Ephemeral Cave Amphipod Ezell's Cave Amphipod Grady's Cave Amphipod Devil's Sinkhole Amphipod	Hay's Spring Amphipod Pickle Springs Amphipod Malheur Cave Amphipod Tidewater Stygonectid Amphipod Long-legged Cave Amphipod	Kubious Cave Amphipod Mackenzie's Cave Amphipod Mountain Cave Amphipod Morrison's Cave Amphipod Bath County Cave Amphipod Norton's Cave Amphipod	Onondaga Cave Amphipod Ozark Cave Amphipod Minute Cave Amphipod Peck's Cave Amphipod Pizzini's Amphipod Wisconsin Well Amphipod Reddell's Cave Amphipod	Alabama Well Amphipod Spring Cave Amphipod Stellmack's Cave Amphipod Subtle Cave Amphipod Wengeror's Cave Amphipod
Stygobromus elatus Stygobromus emarginatus Stygobromus ephemerus Stygobromus flagellatus Stygobromus gradyi Stygobromus hadenoecus	Stygobromus nara Stygobromus hayi Stygobromus heteropodus Stygobromus hubbsi Stygobromus identatus Stygobromus longipes	Stygobromus lucifugus Stygobromus mackenziei Stygobromus montanus Stygobromus morrisoni Stygobromus mundas	Stygobromus onondagaensis Stygobromus ozarkensis Stygobromus parvus Stygobromus pecki Stygobromus pizzinii Stygobromus reddelli	Stygobromus smithii Stygobromus spinatus Stygobromus stellmacki Stygobromus subtilis Stygobromus wengerorum

Family Gammaridae

Gammarus acheronytes

Family Orchestiidae

Gammarus hyalieioides

Gammarus pecos

Gammarus bousfieldi Gammarus desperatus Spelasorchestia koloana

Order DECAPODA

Family Astacidae

Austropotamobius torrentium

Pacifastacus nigrescens

Pacifastacus fortis

Palaemonias alabamae

Syncaris pacifica Typhlatya monae

Family Atyidae

Austropotamobius pallipes

Astacus astacus

Astacoides madagascariensis

Astacopsis franklinii

Cherax crassimanus

Astacopsis gouldi

Family Parastacidae

Family Artemidae

Artermia monica

R West Australia		I U.S.A.	I U.S.A. E U.S.A.		I U.S.A.	I U.S.A. V U.S.A.	CT Caribbean CT New Zealand CT Caribbean CT Indo-Pacific	K U.S.A.
	Cocoline Crab	Big South Fork Crayfish Greensboro Burrowing Crayfish	Chickamanga Crayfish Obey Crayfish	Louisville Crayfish Nashville Crayfish Orlando Cave Crayfish	Pee Dee Idic Crayfish	Texas Cave Shrimp Florida Cave Shrimp	Spiny Lobster Rock Lobster Spotted Spiny Lobster Spiny Lobster	California Bay Pea Crab
Engaewa subcoerulea Family Coenobitidae	Erigus tairo Family Cambaridae Cambarus batchi	Cambarus bouchardi Cambarus catagius Cambarus chaemodartulus	Cambarus extraneus Cambarus obeyensis Cambarus zophonastes	Orconectes jeffersoni Orconectes shoupi Procambarus acherontis Procambarus connus	Procambarus lepiclocdactylus Family Palaemonidae	Palaemonetes antrorum Palaemonetes cummingi Family Palinuridae	Anulirus argus Jasus edwardsii Panulirus guttatus Panulirus penicillatus	Family Pinnotheridae Parapinnixa affinis

Family Nephropidae

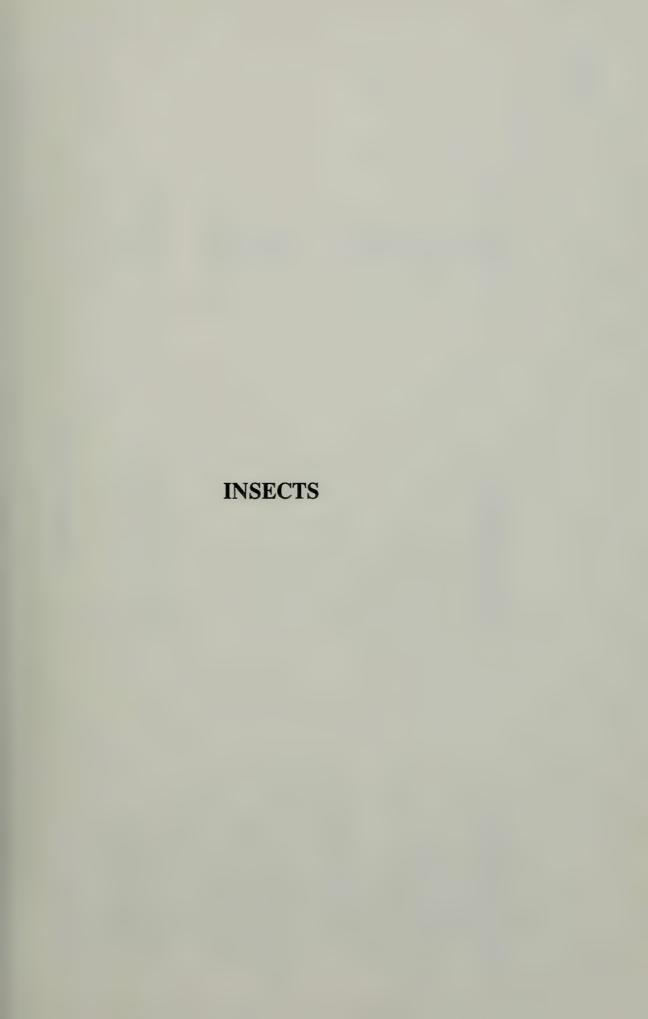
Homarus americanus Homarus gammarus Nephrops norvegicus

American Lobster European Lobster Norway Lobster

North Atlantic North-east Atlantic North-east Atlantic

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Subphylum UNIRAMIA

Class INSECTA

Order THYSANURA	Family Machilidae	Machiloides heteropus	Machiloides perkinsi
Order	Famil	Machiloid	Machiloid

Order COLLEMBOLA Family Neanuridae

Womersleymeria n.sp. "zachariae" Womersleymeria n.sp. "iresoni" Acanthanura n.sp. "mesibovi" Womersleymeria bicornis Megalanura tasmaniae Acanthanura dendyi

Order EPHEMEROPTERA

Tasmanophlebia lacus-coerulei Family Siphlonuridae Acanthometropus pecatonica Isonychia diversa Ameletus falsus

Family Baetidae

Heterocleon berneri

Family Oligoneuridae Homoeoneuria cahabensis Homoeoneuria dolani

Hawaii (U.S.A.) Hawaii (U.S.A.)
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ian Long-palp Bristletail
ian Long

Hawaii Perkin Tasmania Tasmania Tasmania Tasmania Tasmania Tasmania

U.S.A.] U.S.A. U.S.A.

Pecatonica River Mayfly

False Mayfly Diverse Mayfly

Large Blue Lake Mayfly

Australia

U.S.A.

Berner's Two-winged Mayfly

U.S.A.

Blackwater Sand-filtering Mayfly Cahaba Sand-filtering Mayfly

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Meridion Blackwater Mayfly	American Sand-burrowing Mayfly	Colorado Burrowing Mayfly West Virginia Burrowing Mayfly Robust Burrowing Mayfly	Frison's Mayfly Spicluose Mayfly Argo Mayfly	Yellow Mayfly			
Family Heptageniidae Pseudirion meridionalis	Family Behningiidae Dolania americana	Family Ephemeridae Ephemera compar Ephemera triplex Pantagenia robusta	Family Ephemerellidae Ceratella frisoni Ceratella spiculosa Ephemerella argo	Family Caenidae Brachycercus flavus	Order ODONATA Family Amphipterygidae Amphipteryx agrioides	Family Calopterygidae Calopteryx angustipennis Calopteryx syriaca Hetaerina rudis	Family Chlorolestidae Chlorolestes draconicus

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Ecchlorolestes nylephtha Ecchlorolestes perengueyi Phylolestes ethelae

Family Megapodagrionidae

Amanipodagrion gilliesi Heteragrion eboratum Heteragrion tricellulare Hypolestes clara Hypolestes trinitatis Paraphlebia zoe Thaumatoneura inopinata

Family Hemiphlebiidae

Hemiphlebia mirabilis

Family Coenagrionidae

Aciagrion rarum
Argiagrion leoninum
Argiocnemis solitaria
Argiocnemis umbargae
Ceriagrion mourae
Coenagrion hylas freyi
Coenagrion mercuriale
Enallagma camerunense
Enallagma polychromaticum
Encllagma recurvatum

Frey's Damselfly Southern Damselfly Barrens Bluet Damselfly San Francisco Forktail Damselfly Adytum Damselfly Fallax Damselfly Pele Damselfly

> Megalagrion amaurodytum fallax Megalagrion amaurodytum peles

Megalagrion adytum

South Africa South Africa Dominican Republic	Tanzania	Guatemala, Hondur	Guatemala, Mexico	Jamaica	Cuba	Mexico	Costa Rica, Paname
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Angola	Sierra Leone	Mauritius	Cameroon	Mozambique	Austria, F.R.G., Switz	
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Australia

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Europe	Tropical Africa	South Africa	U.S.A.	U.S.A.	Hawaii (U.S.A.)	Hawaii (U.S.A.)
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Megalagrion amaurodytum waianaeanum
Megalagrion jugorum
Megalagrion leptodemas
Megalagrion nigrolineatum
Megalagrion oceanicum
Megalagrion oceanicum
Megalagrion santhomelas
Mortonagrion hirosei
Nehalennia pallidula
Pseudagrion quadrioculatum
Seychellibasis alluaudi alluaudi

Family Platycnemididae

Metacnemis angusta Platycnemis mauriciana

Family Platystictidae

Palaemnema chiriquita Palaemnema gigantula Palaemnema melanota Palaemnema paulicoba

Family Protoneuridae

Nososticta pilbara

Family Pseudostigmatidae
Mecistogaster asticta
Mecistogaster pronoti

Waianae Damselfly
Jugorum Melalagrion Damselfly
Leptodemas Damselfly
Nigrohamatum Damselfly
Blackline Damselfly
Oahu Damselfly
Pacific Damselfly
Pacific Damselfly

Hawaii (U.S./	Hawaii (U.S./	Hawaii (U.S./	Hawaii (U.S.	Hawaii (U.S.A	Hawaii (U.S.	Hawaii (U.S.	Hawaii (U.S.A	Hawaii (U.S.)	Japan	U.S.A.	Zaire	Seychelles	
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South Airica	Mauritius	
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Costa Rica	Costa Rica	Costa Rica	Mexico	Costa Rica
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R Australia

V Brazil

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Epiophlebiida	
ophl	Horni
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Family	lohio
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India, Nepal

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Relict Himalayan Dragonfly

Tanzania Australia

Cephalaeschna acutifrons Family Aeshnidae Aeshna williamsoniana Acanthaeshna victoria Aeshna persephone Aeshna meruensis Aeshna viridis

Family Gomphidae

Erpetogomphus lampropeltis Burmagomphus sivalikensis Antipodogomphus hodgkini Cornigomphus guineensis Epigomphus verticornis Diaphlebia pallidistylus Epigomphus subsimilis Gomphurus consanguis Gomphurus ozarkensis Arigomphus maxwelli Epigomphus crepidus Gomphurus modestus Epigomphus clavatus Epigomphus paulsoni Epigomphus camelus Gomphus diminutus Gomphurus lynnae Gomphus flavipes Gomphus graslini Gomphus hodgesi

Europe to Siberia Australia Mexico U.S.A. India KKKHI Cherokee Clubtail Dragonfly

North Palaearctic Propical Africa rance, Spain Costa Rica Costa Rica Guatemala Costa Rica Costa Rica Mexico Mexico U.S.A. U.S.A. U.S.A. U.S.A. U.S.A. U.S.A. J.S.A. India

Diminutive Clubtail

Gulf Clubtail

Hodges' Clubtail

I U.S.A. R U.S.A. R U.S.A. R U.S.A. R Australia I Madagascar R Turkey, U.S.S.R. E Israel, Jordan, Turkey R U.S.A. V Eastern North America	Ex: Europe to Siberia Ex: U.S.A. V U.S.A. I U.S.A. R Egypt, Niger R U.S.A. I Mexico V U.S.A. R U.S.A. R U.S.A. R U.S.A.
Tennessee Clubtail Dragonfly Septima's Clubtail Dragonfly Sandhills Clubtail Dragonfly Twin-Striped Clubtail	Grune Keiljungter Edmund's Snaketail Dragonfly Howe's Midget Snaketail Dragonfly Alleghany Snaketail Dragonfly Belle's Sand Clubtail Yellow-sided Clubtail Bronze Clubtail Dragonfly
Gomphus sandrius Gomphus septima Hylogomphus carolinus Hylogomphus geminatus Hylogomphus parvidens Ictinogomphus pasvidens Ictinogomphus assimilis Onychogomphus assimilis Onychogomphus acuminatus	Ophiogomphus cecilia Ophiogomphus edmundo Ophiogomphus howei Ophiogomphus incurvatus Ophiogomphus sincurvatus Progomphus sinaiticus Progomphus risi Stylurus potulentus

I Tasmania

K Australia

E Turkey, U.S.S.R.

Family Cordulegasteridae Cordulegaster mzymtae

Family Petaluridae Petalura pulcherrima

Family Neopetaliidae Archipetalia auriculata

Zoraena sayi	Florida Spiketail Dragonfly	臼	U.S.A.
Family Corduliidae Antipodochlora braueri Austrocordulia territoria Libellulosoma minuta		H R H R	New Zealand Australia Madagascar
Macromia splendens Macromia wabashensis Neurocordulia clara Oxygastra curtisii	Shining Macromia Dragonfly Wabash Belted Skimmer Dragonfly Apalichicola Twilite Skimmer Dragonfly Orange-spotted Emerald	R K L > R	France, Portugal, Spain U.S.A. U.S.A. North Africa, West Europe
Somatochlora incurrata	Calverts' Emerald Ohio Emerald Dragonfly	1 22 12 12	U.S.A. U.S.A. Fastern North America
Somatochlora margarita Somatochlora ozarkensis Synthemiopsis gomphomacromioides Williamsonia lintneri	Big Thicket Emerald Dragonfly Banded Bog Skimmer Dragonfly	****	U.S.A. U.S.A. Tasmania U.S.A.
Family Libellulidae Aethiothemis watuliki Allorhizucha campioni Anectothemis apicalis Brachythemis fuscopalliata Brachythemis liberiensis Congothemis longistyla Eleuthemis beuttikoferi quadrigutta Leucorrhinia albifrons Libellula angelina	Purole Chaser	*******	Congo Sierra Leone Tropical Africa Israel, Turkey, Iraq Guinea-Bissau Zaire Mozambique, Zimbabwe Europe, West Siberia Japan U.S.A.
	Something of the second	:	

I U.S.A.	I U.S.A. I U.S.A. I U.S.A. I U.S.A. I Tasmania I U.S.A.	V Spain I Hawaii (U.S.A.) I U.S.A. I U.S.A. I Hawaii (U.S.A.) I U.S.A. Ex [U.S.A.] I U.S.A. V Southern Europe	I U.S.A.	I Hawaii (U.S.A.) I Hawaii (U.S.A.) I Hawaii (U.S.A.) I U.S.A. I Hawaii (U.S.A.) I U.S.A. I Hawaii (U.S.A.) I Hawaii (U.S.A.)
Navajo Jerusalem Cricket	Arizona Giant Sand Treader Cricket Kelso Giant Sand Treader Cricket Coachelia Giant Sand Treader Cricket Samwell Cave Cricket	Nihoa Banza Conehead Katydid Big Pine Key Conehead Katydid Keys Short-winged Conehead Katydid Remote Conehead Katydid Middlekauf's Shieldback Katydid Antioch Dunes Shieldback Katydid Santa Monica Shieldback Katydid Predatory Bush Cricket	Prairie Mole Cricket	Howarth's Cave Cricket Schauinsland's Bush Cricket Kaumana Cave Cricket Keys Scaly Cricket Oahu Deceptor Bush Cricket Laricis Tree Cricket

Conocephaloides remotus

diostatus middlekaufi

Neduba longipennis

Saga pedo

Neduba extincta

Belocephalus micanopy

Belocephalus sleighti

Family Tettigoniidae

Baetica ustulata Banza nihoae

Tasmanoplectron isolatum

Utabaenetes tanneri

Caconemobius schauinslandi

Cycloptilum irregularis

Leptogryllus deceptor

Oecanthus laricis

Caconemobius varius

Caconemobius howarthi

Family Gryllidae

Thaumatogryllus cavicola

Family Gryllotalpidae

Gryllotalpa major

Family Rhaphidophoridae

Stenopelmatus navajo

Daihinibaenetes arizonensis

Macrobaenetes kelsoensis

Macrobaenetes valgum

Pristoceuthophilus sp.

I Hawaii (U.S.A.)	I U.S.A. I U.S.A.	I U.S.A. I Tasmania I U.S.A. I U.S.A.	I U.S.A. I U.S.A.	Ex [Lord Howe I. (Australia)]	E St Helena	I U.S.A. I U.S.A.	I Tasmania
Kauai Thin-footed Bush Cricket	Pinaleno Monkey Grasshopper Desert Monkey Grasshopper	Idaho Point-headed Grasshopper Michigan Bog Grasshopper Siskiyou Chloealtis Grasshopper	Sierra Pygmy Grasshopper Torreya Pygmy Grasshopper	Lord Howe Island Stick-insect	St Helena Earwig	Meltwater Stonefly Wahkeena Falls Flightless Stonefly	
Thaumatogryllus variegatus	Family Eumastacidae Eumorsea pinaleno Psychomastix deserticola	Family Acrididae Acrolophitus pulchellus Appalachia arcena Calliptamus baiulus Chloaeltis aspasma Spharagemon superbum	Family Tetrigidae Tetrix sierrana Tettigidea empedonepia	Order PHASMATOPTERA Family Phasmatidae Dryococelus australis	Order DERMAPTERA Family Labiduridae Labidura herculeana	Order PLECOPTERA Family Nemouridae Lednia tumana Nemours wahkeena	Family Notonemouridae Kimminsoperla biloba

I Tasmania	I U.S.A.	I U.S.A.	I U.S.A.	I U.S.A. I U.S.A. I U.S.A.	Ex [U.S.A.]	I U.S.A.	E Australia I Tasmania	R Australia R Australia
	Lake Tahoe Benthic Stonefly	Schoolhouse Springs Stonefly	Leon River Stonefly	Georgia Stonefly Cheaha Stonefly Hanson's Appalachian Stonefly	Robert's Stonefly	Fender's Stonefly	Otway Stonefly	Mount Kosciusko Wingless Stonefly Mount Donna Buang Wingless Stonefly
Kimminsoperla williamsi	Family Capniidae Capnia lacustra	Family Leuctridae Leuctra szczytkoi	Family Taeniopterygidae Taeniopteryx starki	Family Perlidae Beloneuria georgiana Beloneuria jamesae Hansonoperla appalachia	Family Chloroperlidae Alloperla roberti	Family Peltoperlidae Soliperla fenderi	Family Eustheniidae Eusthenia nothofagi Eusthenia reticulata	Family Gripopterygidae Leptoperla cacuminis Riekoperla darlingtoni

I Hawaii (U.S.A.)	E India	I U.S.A.	E U.S.A. I U.S.A.	I U.S.A.	I U.S.A.	I Hawaii (U.S.A.) I Hawaii (U.S.A.)	I Hawaii (U.S.A.) I Hawaii (U.S.A.) I Hawaii (U.S.A.) I Hawaii (U.S.A.)
Swezey's Zoroapteran	Pygmy Hog Sucking Louse	Saratoga Springs Bug	Ash Meadows Bug Amargosa Bug	Aaa Water Treader Bug	Dry Creek Cliff Strider Bug	Phyllostegian Leaf Bug Lanai Leaf Bug	Pulchrus Thread Bug Ana Wingless Thread Bug Mount Tantalus Wingless Thread Bug Robert's Wingless Thread Bug
Order ZORAPTERA Family Zorotypidae Zorotypus swezeyi	Order ANOPLURA Family Haematopinidae Haematopinus oliveri	Order HEMIPTERA Family Belastomatidae Belostoma saratogae	Family Naucoridae Ambrysus amargosus Pelocoris shoshone	Family Mesoveliidae Cavaticovelia aaa	Family Macroveliidae Oravelia pege	Family Miridae Cyrtopeltis phyllostegiae Kalania hawaiiensis	Family Reduviidae Empicoris pulchrus Nesidiolestes ana Nesidiolestes insularis Nesidiolestes roberti

I Hawaii (U.S.A.) I Hawaii (U.S.A.)	I Hawaii (U.S.A.)	I Hawaii (U.S.A.) I Hawaii (U.S.A.)	I Hawaii (U.S.A.)	I Hawaii (U.S.A.) I Hawaii (U.S.A.) I Hawaii (U.S.A.)
Selium Wingless Thread Bug Smith's Reduviid Bug	Mauna Loa Seed Bug Kauai Band-legged Seed Bug Mount Haleakala Seed Bug Villosan Flightless Seed Bug French Frigate Shoal Seed Bug Necker Goosefoot Seed Bug Nihoae Seed Bug Necker Bunchgrass Seed Bug Bryan's Seed Bug Perkin's Oceanides Seed Bug Rough-headed Seed Bug	Annectans Bug Hawaiian Bug	Kauai Parti-coloured Planthopper Wild Cotton Planthopper Lanai Planthopper Lihue Planthopper Barber's Point Planthopper	Mt Tantalus Shortwing Fern Planthopper Iao Valley Planthopper Bridewell's Planthopper

Family Rhopalidae

Oceanides rugosiceps

Oceanides perkensi

Nysius sulfusus Oceanides bryani

Family Lygaeidae

Metrarga obscura

Neseis alternatus

Nesocryptias villosa

Neseis haleakalae

Nysius neckerensis

Nysius nihoae

Nysius frigatensis

Nesidiolestes selium

Siacella smithi

Order HOMOPTERA

Family Cixiidae

Oliarus consimilis Oliarus discrepans Oliarus lanaiensis

Ithmamar hawaiiense

Ithamar annectans

Family Delphacidae

Oliarus myoporicola

Oliarus lihue

Nesorestias filicicola

Nesosydne bridwelli

Nesosydne acuta

I Hawaii (U.S.A.)	V U.S.A. V Canada V U.S.A.	I Tasmania	I U.S.A.	I Tasmania	Ex [Hawaii (U.S.A.)] Ex [Hawaii (U.S.A.)]	I Hawaii (U.S.A.), U.S.A.	K South & Central Europe
Nahiku Planthopper Glenwood Planthopper Kusche's Planthopper Diamond Head Planthopper Long-footed Planthopper Keanae Planthopper	Cassini Periodical Cicada Decim Periodical Cicada Decula Periodical Cicada		Red-veined Prairie Leafhopper				
Nesosydne cyrtandrae Nesosydne cyrtandricola Nesosydne kuschei Nesosydne leahi Nesosydne longipes	Family Cicadidae Magicicada cassini Magicicada septendecim Magicicada septendecula	Family Tettigarctidae Tettigarcta tormentosa	Family Cicadellidae Felexamia rubranura	Family Aphididae Ceriferella leucopogonis	Family Pseudococcidae Clavicoccus erinaceus Phyllococcus oahuensis	Order NEUROPTERA Family Ithonidae Oliarces clara	Family Mantispidae Mantispa styriaca

Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.)	Europe Europe	Europe Europe Europe Hawaii (U.S.A.) Europe	U.S.A. St Helena I	Europe, North Africa, U.S.S.R. Europe	France, Italy U.S.A. Malaysia U.S.A.	U.S.A.
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Haleakala Spongillalfy Cooke's Spongillalfy Lobe-wing Spongillalfy Swezey's Spongillalfy Usinger's Spongillafy		Molokai Antlion	Beller's Ground Beetle	Caterpillar Searcher Blue Ground Beetle	Delta Green Ground Beetle Ghost Walker Beetle Schaum's Blue Ridge Ground Beetle	Idaho Dunes Tiger Beetle
Family Hemerobiidae Nesothauma halakalae Pseudopsectra cookeorum Pseudopsectra lobipennis Pseudopsectra swezeyi Pseudopsectra usingeri	Family Ascalaphidae Libelloides libelluloides Libelloides macaronius	Family Myrmeleontidae Acanthaclisis occitanica Dendroleon pantherinus Distoleon tetragrammicus Eidoleon perjurus Myrmeleon formicarius	Order COLEOPTERA Family Carabidae Agonum belleri Aplothorax burchelli	Calosoma sycophanta Carabus intricatus	Carabus olympiae Elaphrus viridis Mormolyce phyllodes Sphaeroderus schaumi shenandoah	Family Cicindelidae Cicindela arenicola

1 U.S.A.	I U.S.A. I U.S.A.	I U.S.A. I U.S.A. E North & Central Europe, Siberia E Central & West Europe I U.S.A. Ex? U.S.A.
Cazier's Tiger Beetle Smyth's Tiger Beetle Columbia River Tiger Beetle North-eastern Beach Tiger Beetle Oblivious Tiger Beetle Coral Pink Dunes Tiger Beetle Tiger Beetle Cobblestone Tiger Beetle Los Olmos Tiger Beetle Subtropical Blue-Black Tiger Beetle Neojuvenile Tiger Beetle Puritan Tiger Beetle Greenest Tiger Beetle	Hungerford's Crawling Water Beetle Disjunct Crawling Water Beetle	Death Valley Agabus Diving Beetle Fig Seed Diving Beetle Texas Cave Beetle Elusive Diving Beetle Folkert's Diving Beetle Woolly Diving Beetle Leech's Skyline Diving Beetle Spangler's Diving Beetle Sulphur Springs Diving beetle Utah Diving Beetle Utah Diving Beetle
Cicindela cazieri Cicindela chlorocephala smythi Cicindela chlorocephala smythi Cicindela dorsalis dorsalis Cicindela latesignata obliviosa Cicindela limbata albissima Cicindela marginipennis Cicindela marginipennis Cicindela nevadica olmosa Cicindela nevadica olmosa Cicindela obsoleta neojuvenalis Cicindela puritana Cicindela tranquebarica viridissima	Family Haliplidae Brychius hungerfordi Haliplus nitens	Family Dytiscidae Agabus rumppi Desmopachria conchramis Dytiscus latissimus Graphoderus bilineatus Haideoporus texanus Hydroporus folkertsi Hydroporus hirsutus Hydroporus spangleri Hydroporus sulphurius Hydroporus sulphurius Hydroporus attahensis

I U.S.A. I U.S.A. I U.S.A. I U.S.A.	I U.S.A.	I U.S.A. E Eastern North America	I U.S.A. I U.S.A. I U.S.A. I U.S.A. I U.S.A.
Curved-foot Diving Beetle Narrow-foot Diving Beetle Travertine Band-thigh Diving Beetle Sylvan Diving Beetle	Maureen's Minute Moss Beetle Maureen's Moss Beetle Animas Minute Moss Beetle Texas Minute Moss Beetle Utah Minute Moss Beetle Wing-shoulder Minute Moss Beetle Wing-shoulder Minute Moss Beetle Wilbur Springs Minute Moss Beetle	Blind Cave Beetle American Burying Beetle	Leech's Water Scavenger Beetle Utah Water Scavenger Beetle Arizona Water Scavenger Beetle Ricksecker's Water Scavenger Beetle Seclusive Water Scavenger Beetle

Ochthebius putnamensis

Ochthebius crassalus

Limnebius utahensis

Limnebius texanus

Limnebius aridus

Ochthebius reticulatus

Glacicavicola bathysciodes

Family Leiodidae

Spanglerogyrus albiventris

Family Gyrinidae

Hygrotus diversipes Hygrotus fontinalis

Hygrotus curvipes

Hygrotus sylvanus

Family Hydraenidae

Gymnocthebius maureenae

Hydraena maureenae

Family Hydrophilidae

Hydrochara rickseckeri

Paracymus seclusus

Cymbiodyta arizonica

Chaetarthria utahensis

Chaetarthria leechi

Nicrophorus americanus

Family Silphidae

E Hawaii (U.S.A.) V New Zealand V New Zealand	V U.S.A.	V Sardinia (Italy)	I U.S.A.	I U.S.A.	I U.S.A.	I U.S.A.	I U.S.A.	I U.S.A.	I U.S.A.	I U.S.A.	V U.S.A.	E U.S.A.	I U.S.A.	I U.S.A.	V Caribbean & N. South America	K Trinidad & Tobago	V Dominica, Guadeloupe	V Martinique, St Lucia	I U.S.A.	I U.S.A.
Kauai Flightless Stag Beetle	Caracara Commensal Scarab Beetle		Ciervo Scarab Beetle	Cresent Dune Scarab Beetle Hardv's Scarab Beetle	Large Scarab Beetle	Exiguous Scarab Beetle	Archbold Scarab Beetle	Tibial Scarab Beetle	Ford's Beetle	Tortoise Commensal Scarab Beetle	Big Pine Key Dung Beetle	Woodruff's Dung Beetle	Tortoise Commensal Scarab Beetle	Miami Roundhead Scarab Beetle	Hercules Beetle		Hercules Beetle	Hercules Beetle	Kelso Dune Scarab Beetle	Spiny Florida Sandhill Scarab Beetle
Family Lucanidae Apterocychus honoluluensis Dorcus auriculatus Dorcus ithaginis	Family Trogidae Trox howelli	Family Geotrupidae Typhaeus hiostius	Family Scarabaeidae Aegialia concinna	Aegialia crescenta	Agialia magnifica	Anomala exigua	Anomala eximia	Anomala tibialis	Aphodius fordi	Aphodius troglodytes	Afaenius superficialis	Ataenius woodruffi	Copris gopheri	Cyclocephala miamiensis	Dynastes hercules	Dynastes hercules glaseri	Dynastes hercules hercules	Dynastes hercules reidi	Glaresis arenata	Gronocarus multispinosus

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White Sand Bear Scarab Beetle Pacific Sand Bear Scarab Beetle Scrub Island Burrowing Scarab Beetle	Tortoise Commensal Scarab Beetle	Hermit Beetle Ocala Burrowing Scarab Beetle	Woody Gulf Dune Scarab Beetle	Saline Valley Snow-front Scarab	Spotted Warner Valley Dunes Scarab Barbate Scarab Beetle	Atascodera Scarab Beetle	Cromwell Chafer	Giuliani's Dune Scarab Beetle	Frost's Spring Scarab Beetle	Tantula Scarab Beetle	Scrub Palmetto Flower Scarab Beetle	Goldstreifiger		Wawawona Riffle Beetle	Brownish Riffle Beetle	Giuliani's Riffle Beetle	Little fulle beetle Robust Riffle Beetle	Stephan's Riffle Beetle	Marron's San Carlos Kutle Beetle Brown's Riffle Beetle
Lichnanthe albopilosa Lichnanthe ursina Mycotrupes pedester	Onthophagus furacatus Onthophagus polyphemi Orotes chemplati	Osnoderna eremita	retion upes youngt Polylamina pubescens	Polyphylla anteronivea	Polyphylla avittata Polymbylla barbata	Polyphylla nubila	Prodontria lewisi	Pseudocotalpa giulianii	Serica frosti	Serica tantula	Trigonopelastes floridana	Family Buprestidae Buprestis splendens	Family Elmidae	Atractelmis wawona	Cyttoepus parken Duhiranhia brunnescens	Dubiraphia giulianii	Dubiraphia parva	Duoi apina robasia Heterelmis stephani	Huleechius marroni carolus Microcylloepus browni

and

Dicranopselaphus variegatus

Alabamaubria starki

Acneus burnelli

Acneus beeri

Psephenus arizonensis Psephenus montanus Family Elateridae

Family Psephenidae

Stenelmis calida calida Stenelmis calida moapa

Optioservus phaeus

Optioservus browni Optioservus canus Stenelmis douglasensis

Stenelmis gammoni

Zaitzeva thermae

Photuris brunnipennis floridana

Family Lampyridae

Micronaspis floridana

Family Eucnemidae

Paleoxenus dohmi

Eopenthes (17 species)

Itodacnus spp.

Amychus granulatus

Eanus hatchi

Amychus candezei

Hawaii (U.S.A.)	E Northern & Central Europe	Mexico, U.S.A. U.S.A. Seychelles	U.S.A. W.S.A. U.S.A. U.S.A. U.S.A.	U.S.A. U.S.A.	Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.) Central & Northern Europe U.S.A. U.S.A.
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Piko Anobiid Beetle	Scharlachkafer	Globose Dune Beetle San Joaquin Dune Beetle Frigate Isl. Giant Tenebrionid Beetle	Hopping's Blister Beetle Mojave Desert Blister Beetle Anthony Blister Beetle Moestan Blister Beetle Molestan Blister Beetle Morison's Blister Beetle	Antioch Dunes Beetle Sacramento Beetle	Cerambyx Longicorn Mojave Rabbitbrush Longhorn Beetle Valley Elderberry Longhorn Beetle Six-banded Longhorn Beetle
Family Anobiidae Holcobius pikoensis	Family Cucujidae Cucujus cinnaberinus	Family Tenebrionidae Coelus globosus Coelus gracilis Polposipus herculeanus	Family Meloidae Lytta hoppingi Lytta inseperata Lytta mirifica Lytta moesta Lytta molesta Lytta morrisoni	Family Anthicidae Anthicus antiochensis Anthicus sacramento	Family Cerambycidae Aeschrithmysus dubautianus Aeschrithmysus swezeyi Aeschrithmysus terryi Cerambyx cerdo Crossidius mojavensis mojavensis Desmocerus californicus dimorphus Dryobius sexnotatus

Family Anobiidae

K Brazil, Peru E Central Europe, U.S.S.R. I Hawaii (U.S.A.) E Hawaii (U.S.A.) E Hawaii (U.S.A.)	E Hawaii (U.S.A.) E Central & Northern Europe Ex [Chatham Is (New Zealand)]	I U.S.A.	ss E Hawaii (U.S.A.)		V New Zealand F. Hawaii (TSA)	•	Ex [Hawaii (U.S.A.)]		V Chatham Is (New Zealand) V New Zealand		E Hawaii (U.S.A.)			Ex [Hawaii (U.S.A.)]
Rude's Longhorn Beetle	Rosalia Longicorn	Bog Idol Leaf Beetle	Hawaiian Proterhinus Beetles	Flax Weevil	Turbott's Weevil	Ogliu Nesiotes Weevin	Land W. Carlotte	Antioca Dune Weevil Lichen Weevil					Speargrass Weevil	
Macrodontia cervicornis Morimus funereus Necydalis rudei Nesithmysus bridwelli Nesithmysus frobesi Nesithmysus haasi	Nesithmysus swezeyi Plagithmysus (49 species) Rosalia alpina Xylotoles costatus	Family Chrysomelidae Donacia idola	Family Aglycyderidae Proterhinus (72 species)	Family Curculionidae Anagotus fairburni	Anagotus turbotti	Democossonus nesiotes Decontraris distinguendus	Dryotribus mimeticus	Dysticheus rotundicollis Gymnopholus lichenifer	Hadramphus spinipennis	Hadromphus suloocarpae Hodromphus tuberculatus	Heteramphus filicum	Heteresis seticostatus	Lyperobius huttoni	Macrancylus linearis

Megacolabus sculpturatus Microcryptorhynchus orientissimus		V New Zealand R Henderson I. (Pitcairn)
Miloderes nelsoni Miloderes rulieni	Nelson's Weevil Rulien's Weevil	I U.S.A. I U.S.A.
Nesotocus giffordi	Gifford's Weevil	I Hawaii (U.S.A.)
Nesotocus kauaiensis	Kauai Weevil Munro's Weevil	I Hawaii (U.S.A.) I Hawaii (U.S.A.)
Nothaldonis peaci	Man o wood	E New Zealand
Oclandius laeviusculus		
Oedemasylus laysanensis		Ex [Hawaii (U.S.A.)]
Onchobarus langei Oodemas (whole genis)	Lange's El Segundo Dune Weevil Windward Chain Weevils	I U.S.A. I Hawaii (U.S.A.)
Pentarthrum blackburni	Blackburn's Weevil	Ex? Hawaii (U.S.A.)
Pentarthrum obscura	Obscure Weevil	
Pentarthrum pritchardias		E Hawaii (U.S.A.)
Rhyncogonus (22 species)	Hawaiian Snout Beetles	E Hawaii (U.S.A.)
Rhyncogonus hendersoni		R Henderson I. (Pitcairn)
Stenotrupis pritchardiae	Nihoa Weevil	I Hawaii (U.S.A.)
Trigonoscuta brunnotesselata	Brown-tassel Weevil	I U.S.A.
Trigonoscuta dorothea dorothea	Dorothy's El Segundo Dune Weevil	I U.S.A.
Trigonoscuta doyeni	Doyen's Dune Weevil	
Trigonoscuta rossi	Fort Ross Weevil	
Trigonoscuta yorbalindae	Yorba Linda Weevil	Ex? U.S.A.
Unas piceus		v inew Zealand
Order MECOPTERA		
Family Arteropanorpidae		-
Apteropanorpa tasmanıca		1 Tasmania
Order DIPTERA Family Psychodidae		
Nemapalpus nearcticus	Sugarfoot Moth fly	1 U.S.A.

I Tasmania E Australia E Tasmania	I U.S.A. I U.S.A. I U.S.A. E Mexico, U.S.A. I U.S.A. Ex [U.S.A.	I U.S.A.	I U.S.A. I U.S.A. I U.S.A.	I U.S.A.	I Hawaii (U.S.A.)	Ex [Hawaii (U.S.A.)]
Giant Torrent Midge Tasmanian Torrent Midge	Ross's Apatalestes Tabanid Fly Florida Asaphomyian Tabanid Fly Texas Asaphomyian Tabanid Fly Belkin's Dune Tabanid Fly Brown Merycomyian Tabanid Fly Volutine Stoneyian Tabanid Fly	Mary Alice's Small-headed Fly	Antioch Robberfly Antioch Robberfly Hurd's Robberfly	Valley Mydas Fly	Hawaiian Dance Fly	

Merycomyia brunnea Stonemyia volutina Family Acroceridae

Eulonchus marialiciae

Family Asilidae

Family Dolichopodidae

Campsicnemus mirabilis

Chersodromia hawaiiensis

Family Empididae

Family Apiocertidae

Cophura hurdi Efferia antiochi Metapogon hurdi Raphiomydas triochilus

Family Blepharoceridae

Edwardsina tasmaniensis

Edwardsina gigantea

Family Tabanidae

Apatalestea rossi Asaphomyia floridensis

Asaphomyia texanus

Brennania belkini

Family Mycetophilidae

Arachnocampa tasmaniensis

I U.S.A.	I Hawaii (U.S.A.)	Ex [Hawaii (U.S.A.)]	I U.S.A.	I U.S.A.
Delong's Flower Fly	Nihoa Two-spotted Asterid Fly		Wilber Springs Shore Fly	Alexander's Caddisfly Castle Lake Caddisfly Obrien Caddisfly Fender's Caddisfly Haddock's Caddisfly Castle Crags Caddisfly Bilobed Caddisfly Spiny Caddisfly One-spot Caddisfly Artesian Caddisfly Denning's Caddisfly Arkansas Caddisfly San Marcos Caddisfly
Family Syrphidae Mixogaster delongi	Family Asteiidae Bryania bipunctata	Family Drosophilidae Drosophila lanaiensis	Family Ephydridae Paracoenia calida	Order TRICHOPTERA Family Rhyacophilidae Rhyacophila alexandra Rhyacophila amabilis Rhyacophila fenderi Rhyacophila haddocki Rhyacophila lineata Rhyacophila lineata Rhyacophila spinata Rhyacophila sunipunctata Rhyacophila sunipunctata Rhyacophila unipunctata Rhyacophila sunipunctata Rhyacophila unipunctata Rhyacophila unipunctata Rhyacophila unipunctata Rhyacophila unipunctata Rhyacophila unipunctata Rhyacophila unipunctata

I U.S.A.	I U.S.A.	I Tasmania	I Tasmania	I U.S.A. I Tasmania I U.S.A.
Knoxville Micro Caddisfly Kite's Micro Caddisfly Alsea Micro Caddisfly Contorted Micro Caddisfly Deschutes Micro Caddisfly Provost's Micro Caddisfly Vertree's Micro Caddisfly Vertree's Micro Caddisfly	Oregon Caddisfly			Cascades Caddisfly Kings Canyon Caddisfly Blue Mountains Caddisfly King's Creek Caddisfly Green Springs Mountain Caddisfly Mount Hood Caddisfly Tombstone Prairie Caddisfly Missouri Caddisfly Kiamath Caddisfly Fort Dick Caddisfly
Family Hydrotilidae Hydroptila decia Neotrichia kitae Ochrotrichia alsea Ochrotrichia phenosa Ochrotrichia provosti Ochrotrichia vertreesi Oxyethira florida	Family Philopotamidae Dolophilodes oregona	Family Stenopsychidae Stenopsychodes lineata	Family Polycentropidae Tasmanoplegas spilota	Family Limnephilidae Apatania tavala Archaeophylax vernalis Cryptochia excella Cryptochia neosa Ecclisomyia bilera Farula davisi Farula reaperi Glyphopsyche missouri Limnephilus alconura

I U.S.A. I U.S.A. I U.S.A. Ex [U.S.A.	I U.S.A. I U.S.A.	I Tasmania I Tasmania	I Tasmania	I U.S.A.	I U.S.A.	I Tasmania	I U.S.A. I U.S.A. I U.S.A. Ex [U.S.A.] I Tasmania
Colombian Gorge Caddisfly Tombstone Prairie Oligophlebodes Clatsop Caddisfly Three-tooth Caddisfly	Fischer's Caddisfly Goeden's Caddisfly			Zigzag Blackwater Caddisfly			Florida Longhorn Caddisfly Vertree's Caddisfly Little Longhorn Caddisfly Athens Caddisfly
Neothramma andersoni Oligophlebodes mostbento Philocasca oron Triaenodes tridonata	Family Lepidostomatidae Lepidostoma fischeri Lepidostoma goedeni	Family Kokiriidae Taskiria mccubbini Taskropsyche lacustris	Family Plectrotarsidae Nanoplectrus truchnasi	Family Sericostomatidae Agarodes ziczac	Family Odontoceridae Psilotreta hansoni	Family Philorheithridae Ramiheithrus kocinus	Family Leptoceridae Ceraclea floridana Ceraclea vertreesi Oecetis parva Triaenodes phalacris Westriplectes pedderensis

V South Africa V Australia	Ex? U.S.A. Ex? U.S.A.	Ex? U.S.A.	I Hawaii (U.S.A.) E Hawaii (U.S.A.)	Ex? U.S.A.	V New Zealand	I Hawaii (U.S.A.)	Ex? U.S.A.	I U.S.A.
Silver Spotted Ghost Moth Bent Wing Swift Moth	American Chestnut Moth Phleophagan Chestnut Moth	Chestnut Clearwing Moth	Necker Leaf-miner Moth			Green Carposinid Moth	Chestnut Ermine Moth	Chestnut Clearwing Moth
Order LEPIDOPTERA Family Hepialidae Leto venus Zelotypia stacyi	Family Nepticulidae Ectodemia castaneae Ectodemia phleophaga	Family Tischeriidae Tischeria perplexa	Family Gracillariidae Petrochroa neckerensis Phildoria wilkesiella	Family Coleophoridae Coleophora leucochrysella	Family Gelechiidae Kiwaia jeanae	Family Carposinidae Heterocrossa viridis	Family Argyresthiidae Argyresthia castaneela	Family Sesiidae Synanthedon castaneae

U.S.A. Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.)	U.S.A.	Tasmania Central & North Europe	Jamaica Dominican Republic	Australia Canada, U.S.A.	U.S.A. Tasmania	South Africa South Africa	South Africa Tasmania	Mexico, U.S.A.	U.S.A.		South Africa
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San Francisco Tree Lupine Ohe Ohe Leaf-roller Moth Green-Banded Ohe Ohe Leaf-roller Moth Wallupe Leaf-Roller Moth	Busk's Gall Moth	Chequered Skipper		Skipper Dakota Skipper	Pawnee Montane Skipper	Barber's Ranger	Bamboo Sylph	Wandering Skipper	Rare Skipper Wondering Skipper	Spinose Skipper Tessellated Skipper	Dickson's Sylph
Family Tortricidae Grapholitha edwardsiana Spheterista oheoheana Spheterista pterotropiana Spheterista reynoldsiana	Family Cochylidae Carolella busckana	Family Hesperiidae Antipodia chaostola leucophaea Carterocephalus palaemon	Epargyreus antaeus Epargyreus spana	Euscheman rafflesia Hesperia dacotae	Hesperia pawnee montana Hesperilla mastersi marakupa	Kedestes barerae bunta Kedestes chaca	Metisella syrinx Oreisplanus munionga larana	Panoquina errans	Problema buienta Desiridocomendos cumos comos	Syrichtus cribrellum Syrichtus tessellum	Tsitana dicksoni

I U.S.A.	R Turkey I Palawan (Philippines) V Sri Lanka R Java (Indonesia) K Sulawesi (Indonesia) V Luzon (Philippines)	R Mexico V Hispaniola K Bhutan R China R China	V Brazil E Brazil V Jamaica R Taiwan	V Sri Lanka K Zaire K Andaman Is (India) R Philippines V Comoro Is	R Bougainville, Solomon Is I Palawan (Philippines) R Bougainville, Solomon Is I Sabah (Malaysia) V Mindanao (Philippines) R Moluccas (Indonesia)	
Maculated Manfreda Skipper	Sri Lankan Rose	Short-horned Baronia Zetides Swallowtail Ludlow's Bhutan Swallowtail Mansfield's Three-tailed Swallowtail Chinese Three-tailed Swallowtail	Yellow Kite Swallowtail Harris' Mimic Swallowtail Jamaican Kite	Sri Lankan Five-bar Swordtail Andamans Swordtail	Meek's Graphium	Chinese Luehdorfia
Family Megathymidae Stallingsia maculosus	Family Papilionidae Archon apollinaris Atrophaneura atropos Atrophaneura jophon Atrophaneura luchti Atrophaneura palu	Arropnaneura scnadenbergi Baronia brevicornis Battus zetides Bhutanitis ludlowi Bhutanitis mansfieldi Bhutanitis thaidina	Eurytides iphitas Eurytides lysithous harrisianus Eurytides marcellinus Graphium alebion chungianus	Graphium antiphates ceylonicus Graphium aurivilliusi Graphium epaminondas Graphium idaeoides	Graphium neeki Graphium megaera Graphium mendana Graphium sandawanum	Graphium siresemain Luchdorfia chinensis

Japan, Taiwan Moluccas (Indonesia) Papua New Guinea New Guinea Moluccas (Indonesia) New Guinea Irian Jaya (Indonesia) Central & West Africa U.S.A. Comoro Is Hispaniola Luzon (Philippines) Cuba Mindanao (Philippines) Kenya Mexico South America Madagascar Argentina, Brazil Jamaica Corsica, Sardinia (Italy) Sulawesi (Indonesia) Burundi, Rwanda, Uganda Madagascar Madagascar Mauritius Taiwan French Guiana Bismarck Arch. (Papua New Gu
LIMI>>IIXKKMIII>I>MM>XK>MMK>KI>X>
Japanese Luehdorfia Queen Alexandra's Birdwing Chimaera Birdwing Rothschild's Birdwing African Giant Swallowtail Schaus' Swallowtail Poey's Black Swallowtail Taita Blue-banded Papilio Homerus Swallowtail Corsican Swallowtail Jordan's Swallowtail Cream-banded Swallowtail
Luehdorfia japonica Ornithoptera aesacus Ornithoptera alexandrae Ornithoptera chimaera Ornithoptera chimaera Ornithoptera coresus Ornithoptera paradisea Ornithoptera paradisea Ornithoptera paradisea Ornithoptera paradisea Ornithoptera tithonus Papilio acheron Papilio aristophontes Papilio aristophontes Papilio aristophontes Papilio aristophontes Papilio carolinensis Papilio carolinensis Papilio carolinensis Papilio desmondi teita Papilio carolinensis Papilio desmondi teita Papilio persesmithi Papilio leucotania Papilio homerus Papilio homerus Papilio homerus Papilio homerus Papilio mangoura Papilio mangoura Papilio maraho Papilio maraho Papilio marani

Madagascan Emperor Swallowtail	\ \	Madagascar
	۷)	Lesser Sunda Is (Indonesia)
	\ \	Philippines
Papillon La Pature		Reunion
	Ex	[Seychelles]
Kilimaniaro Swallowtail	R	Tanzania
	R	Bougainville, Solomon Is
	R	Bismarck Arch. (Papua New Guine
Fluminense Swallowtail	>	Brazil
	> ·	Brazil
1	K	French Guiana
Hahnel's Amazonian Swallowtail	R	Brazil
	K	Venezuela
	X	Brazil, Peru
1	X	Bolivia
Apollo	R	Europe & U.S.S.R. to China
	田	F.R.G.
	R	Afghanistan, Tadzhikistan
Shepard's Clodius Parnassian	н	U.S.A.
H	Ex	[U.S.A.]
	K	China, Vietnam
	H H	India to China
	臼	Taiwan
	I	Sabah, Sarawak (Malaysia)
Talaud Black Birdwing	>	Sulawesi (Indonesia)
	н	Moluccas (Indonesia)
West Virginia White	н	Canada, U.S.A.
	回	South Africa
Andrew's Marble Butterfly	L R	U.S.A. Zimbabwe

Parides klagesi Parides pizarro

Papilio phorbanta nana

Papilio sjoestedti

Papilio toboroi

Papilio phorbanta

Parides burchellanus

Parides hahneli

Parides coelus

Parides ascanius

Papilio weymeri

Papilio morondavana

Papilio neumoegeni

Papilio osmana

Parnassius apollo vinningensis

Parides steinbachi Parnassius apollo Parnassius autocrator

Parnassius clodius shepardii Parnassius clodius strohbeeni

Teinopalpus imperialis Troides aeacus kaguya

Teinopalpus aureus

Troides andromache

Troides prattorum

Troides dohertyi

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Alaena margaritacea	
Aloeides caledoni	
Aloeides dentatis	
Aloeides egerides	
Aloeides lutescens	
Argyrocupha malagrida malagrida	Lion
Argyrocupha malagrida paarlensis	Lion
Callophrys mossii bayensis	San
Capys penningtoni	

Drakensburg Copper Bruno Elfin

's Head Copper 's Head Copper

South Africa

South Africa

Mauritius

South Africa South Africa South Africa South Africa South Africa South Africa

Exi

Millar's Buff

South Africa South Africa

U.S.A.

Florida Atala Hairstreak Miami Blue Butterfly **Texas** Tailed Blue Palos Verdes Blue Mission Blue Xerces Blue

Glaucopsyche lygdamus palosverdesensis

Everes comyntas texanus

Eumaeus atala florida

Erikssonia acraeina

Durbania limbata Deudorix vansoni

Hemiargus thomasi bethune-bakeri Icaricia icarioides missionensis Icaricia icarioides moroensis

Glaucopsyche xerces

Icaricia icarioides pheres Lepidochrysops ariadne Lepidochrysops bacchus

U.S.A.]

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Ex?

Moro Bay Blue Wineland Blue Pheres Blue

South Africa

U.S.A. U.S.A.

South Africa

South Africa South Africa South Africa South Africa South Africa South Africa South Africa

India 出

Family Lycaenidae

Deloneura millari millari

Deudorix penningtoni

Deloneura immaculata

Syclyrius mandersi

Chrysoritis zeuxo Chrysoritis oreas

Chrysoritis cotrelli

Ornipholidotos peucetia penningtoni Lepidochrysops methymna dicksoni Maculinea arionides matsumara Plebejus icarioides missionensis Maculinea teleius burdigalensis Philotiella speciosa bohartorum Lycaeides argyrognomon lotis Lepidochrysops loewensteini Lycaeides melissa samuelis Lepidochrysops hypopolia Panchala ganesa loomisi Lycaena dorcas claytoni Notarthrinus binghami Lepidochrysops lotana Maculinea nausithous Poecilmitis lyncurium Poecilmitis endymion Poecilmitis nigricans Maculinea arionides Plebejus emigdionis Lepidochrysops titei Oxychaeta dicksoni Poecilmitis adonis Poecilmitis aureus Maculinea teleius Oreolyce dohertyi Plebicula golgus Maculinea rebeli Maculinea arion Maculinea alcon Lycaena hermes Lycaena dispar

Greater Large Blue Greater Large Blue Rebel's Large Blue Scarce Large Blue Dusky Large Blue Scarce Large Blue Alcon Large Blue Clayton's Copper Hermes Copper Large Copper Karner Blue Large Blue otis Blue

San Emigdio Blue Naga Hedge Blue Dickson's Copper 30hart's Blue White Mimic Tailless Blue Mission Blue Vevada Blue Tsomo River Copper Blue Jewel Copper

South Africa South Africa South Africa South Africa South Africa U.S.A.

Northern Europe U.S.A.

Mexico, U.S.A. U.S.A.

Surope, U.S.S.R. Europe, U.S.S.R.

China, Japan, U.S.S.R. China, Japan, U.S.S.R.

South & Central Europe Europe & Northern Asia Europe, U.S.S.R.

Trance

India

ndia

Mozambique, South Africa

South Africa

Japan

U.S.A. U.S.A.

U.S.A. Spain

South Africa

South Africa South Africa

South Africa South Africa

Poecilmitis rileyi
Pseudalmenus chlorinda chlorinda
Pseudalmenus chlorinda conara
Pseudiolaus lulua
Shijimiaeoides battoides allyni
Shijimiaeoides enoptes smithi
Shijimiaeoides langstoni langstoni
Shijimiaeoides rita mattonii
Shijimiaeoides rita mattonii
Shiyimiaeoides rita mattonii
Shiyimiaeoides rita mattonii
Shiyimiaeoides rita mattonii
Shiyimiaeoides rita mattonii
Shiymon acis bartrami

Thestor kaplani
Thestor tempe
Trimenia wallengrenii
Uranothauma usambarae

Family Libytheidae Libythea cinyras

Family Danaidae
Amauris comorana
Amauris nossima
Amauris phoedon
Anetia briarea
Anetia cubana
Anetia jaegeri
Anetia pantheratus
Danaus cleophile
Euploea albicosta
Euploea blossomae

White Spotted Sapphire El Segundo Blue Comstock's Blue Smith's Blue Langston's Blue Mattoni's Blue

Bartram's Hairstreak Avalon Hairstreak Dickson's Thestor Kaplan's Thestor

Wallengren's Copper

V South Africa
I Tasmania
V South Africa
E U.S.A.
I U.S.A.
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I U.S.A.
I U.S.A.
V Tanzania
I U.S.A.
K U.S.A.
V South Africa
V South Africa
V South Africa
V South Africa

V South Africa
V South Africa
V Tanzania

Ex [Mauritius]

R Comoro Is

R Comoro Is, Madagascar

R Mauritius

R Cuba, Hispaniola

R Hispaniola

R Hispaniola

R Hispaniola

R Hispaniola

R Hispaniola

R P Hispaniola

Bismarck Arch. (Papua New Guinea) Bismarck Arch. (Papua New Guinea)

Sulawesi (Indonesia)

Indonesia

Sulawesi (Indonesia)

Indonesia

Mauritius, Reunion, Rodrigues

Sulawesi (Indonesia)

Parantica kuekenthali Parantica garamantis Euploea configurata Euploea latifasciata Euploea tripunctata Euploea dentiplaga Ideopsis hewitsonii Parantica dannatti Ideopsis oberthurii Idea tambusisiana Parantica crowleyi Parantica marcia Euploea cordelia Ideopsis klassika Parantica clinias Euploea martinii Parantica albata Parantica davidi Euploea gamelia Euploea caespes Euploea eupator Idea malabarica Parantica kirbyi Euploea doretta Euploea euphon Euploea magou Euploea eboraci Euploea tobleri Euploea lacon Euploea mitra Idea iasonia dea electra

Sulawesi Tree Nymph

Bismarck Arch. (Papua New Guinea) Bismarck Arch. (Papua new Guinea) Java, Sumatra (Indonesia) Bougainville, Solomon Is Irian Jaya (Indonesia) rian Jaya (Indonesia) rian Jaya (Indonesia) Sulawesi (Indonesia) Sulawesi (Indonesia) Sulawesi (Indonesia) Sulawesi (Indonesia) Sumatra (Indonesia) Java (Indonesia) New Guinea Philippines Philippines Philippines Philippines Seychelles Sri Lanka Indonesia Indonesia Sorneo India

Sulawesi (Indonesia) Philippines India Indonesia Philippines Java (Indonesia) New Caledonia Bismarck Arch. (Papua New Guinea) Philippines Sulawesi (Indonesia) Sri Lanka Svi Lan	Europe & Northern Asia Bhutan, India Italy, Switzerland Pyrenees India Southern Europe France, Italy France, Spain Europe Burma, India Bhutan, India
*************	EH>LEHEHH>HH
	False Ringlet Raetzer's Ringlet Gavarnie Ringlet Ottoman Brassy Ringlet Larche Ringlet False Dewy Ringlet Sudeten Ringlet Scarce Red Forester
Parantica menadensis Parantica milagros Parantica nilgiriensis Parantica philo Parantica phyle Parantica pumila Parantica rotundata Parantica schoenigi Parantica sulewattan Parantica taprobana Parantica taprobana Parantica taprobana Parantica wegneri Parantica wegneri Parantica weshei Parantica weniskei Parantica weiskei Protoploea apatela Tirumala euploeomorpha Tirumala gautama	Family Satyridae Coenonympha oedippus Erebia annada annada Erebia christi Erebia gorgone Erebia ottomana Erebia scipio Erebia sthennyo Erebia sudetica Lethe distans

Madagascar, Mauritius, Reunion Bhutan, Burma, India Nicobar (India) Shutan, India Bhutan, India Burma, India Burma, India South Africa South Africa South Africa South Africa South Africa South Africa Madagascar Madagascar Madagascar Mauritius **Tanzania Tanzania** Panzania **Tanzania** U.S.A. Kenya J.S.A. Kenya U.S.A. India ndia India 民民民民民民民义 Uncompahgre Fritillary Butterfly Western Forest Emperor Silver Barred Charaxes Sthenele Wood Nymph Lange's Metalmark Dickson's Brown Florida Leafwing Chestnut Rajah **Battling Glider** Antanartia borbonica mauritiana Charaxes druceanus williamsi Charaxes druceanus entabeni Cymothoe alcimeda alcimeda Charaxes xiphares desmondi Ypthima dohertyi persimilis Pararge menava maeroides Charaxes xiphares xiphares Charaxes durnfordi nicholi Family Nymphalidae Charaxes karkloof capensis Cercyonis sthenele sthenele Apodemia mormo langei Stygionympha dicksoni Antanartia borbonica Lethe europa tamuna Cymothoe amaniensis Apaturopsis pauliani Lethe ocellata lyncus Charaxes usambarae Cymothoe magambae Lethe gemina gafuri Apaturopsis kilusa Cymothoe aurivillii Boloria acrocnema Charaxes marieps Lethe margaritae Charaxes cowani Anaea floridalis Lethe ramadeva Lethe satyavati

Malawi Kenya Andaman Is (India) U.S.A. U.S.A. East & South Africa [Taiwan] Madagascar France, Italy Ecuador, Peru Brazil Tasmania Northern Europe Tanzania Comoro Is, Madagascar, Mauritius Madagascar China, India Madagascar Sikkim (India) Andaman Is (India) Madagascar Seychelles U.S.A. Madagascar, Reunion [Mauritius] Japan, Taiwan U.S.A. Madagascar [U.S.A. Madagascar IU.S.A.
K>KBILI AKSTERTERTETTE ETTE ETTE ETTE ETTE ETTE ET
Andaman Leafwing Bay Checkerspot Butterfly Mono Checkerspot Butterfly Mottled Green Corsican Fritillary Natterer's Longwing Scarce Fritillary Pale Hockeysticker Sailer Pale Hockeysticker Sailer Tawny Crescent Butterfly Salamis Retrecie Salamis Retrecie Salamis Retrecie Smokey Eyed Brown Butterfly Atossa Callippe Silverspot Silverspot
Cymothoe melanjae Cymothoe teita Doleschallia bisaltide andamana Euphydryas editha bayensis Euphydryas editha monoensis Eurphura ochlys Euthalia malapana Euthalia malapana Euthalia malapana Euthalia malapana Euthalia malapana Heliconius charltonius peruvianus Heliconius nattereri Heliconius nattereri Hepolimnas antevorta Hypolimnas antevorta Hypolimnas antevorta Hypolimnas dubius drucei Neptis manasa Neptis manasa Neptis sankara nar Neptis sankara nar Neptis sankara nar Salamis angustina Salamis angustina Salamis angustina angustina Salamis angustina vinsoni Sasakia charonda Saprodes eurydice fumosa Smerina manoro Speyeria adiaste atossa Speyeria adiaste atossa

I Canada, U.S.A. I Mexico, U.S.A. I U.S.A. V U.S.A. R U.S.A.	R Madagascar R Madagascar	T Hawaii (U.S.A.) V New Zealand I Hawaii (U.S.A.) I Hawaii (U.S.A.) I Hawaii (U.S.A.)	I Tasmania I Tasmania I Tasmania I Tasmania I Hawaii (U.S.A.) K Austria, F.R.G. Ex? Hawaii (U.S.A.) Ex? Hawaii (U.S.A.) Ex? Hawaii (U.S.A.) Ex? Hawaii (U.S.A.)
Regal Fritillary Blue Silverspot Great Basin Silverspot Behren's Silverspot Oregon Silverspot Myrtle's Fritillary		Hedyleptan Moths Blue Margaronian Green Margaronian Ohenaupaka Oeobian Moth	Ioxantha Looper Moth Kona Giant Looper Moth Ko'olau Giant Looper Moth Hawaiian Hopseed Looper Moth Ola'a Peppered Looper Moth
Speyeria idalia Speyeria nokomis caerulescens Speyeria nokomis nokomis Speyeria zerene behrensii Speyeria zerene hippolyta Speyeria zerene myrtleae	Family Acraeidae Acraea hova Acraea sambavae	Family Pyralidae Hedylepta (14 species) Kupea electilis Margaronia cyanomichla Margaronia exaula Ocoblia dryadopa	Family Geometridae Acalyphes philorites Dirce aesiodora Dirce lunaris Dirce solaris Fletcherana ioxantha Gnophos obscurata Scotorythra megalophylla Scotorythra nesiotes Scotorythra paratactis Tritocleis microphylla

Central & Southern Europe Central & North Europe to Japan France, Spain	Hawaii (U.S.A.) U.S.A. U.S.A.	Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.)	Hawaii (U.S.A.) [Hawaii (U.S.A.)] Hawaii (U.S.A.) [Hawaii (U.S.A.)] [Hawaii (U.S.A.)]	[Hawaii (U.S.A.)] U.S.A. U.S.A. Hawaii (U.S.A.) [Hawaii (U.S.A.)]	[Hawaii (U.S.A.)]
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Small Lappet Moth Spanish Moon Moth	Great Feacock Moth Kern Primrose Sphinx Moth Prairie Sphinx Moth	Blackburn's Sphinx Moth none known Fabulous Green Sphinx of Kauai	Poko Noctuid Moth Midway Noctuid Moth Kerr's Noctuid Moth Laysan Noctuid Moth	Procellaris grotis Noctuid Moth Marbled Underwing Moth Precious Underwing Moth Hebard's Noctuid Moth Confused Moth Minute Noctuid Moth	Laysan Dropseed Noctuid Moth

Proserpinus proserpina Tinostoma smaragditis

Manduca blackburni

Hyles hippophaes

Family Noctuidae

Agrotis crinigera

Agrotis fasciata

Agrotis kerri

Catocala marmorata

Agrotis procellaris

Agrotis laysanensis Agrotis photophila Helicoverpa confusa Helicoverpa minuta

Hydraecia petasitis Hypena laysanensis

Erythroecia hebardi

Catocala pretiosa

Family Lasiocampidae

Family Saturniidae

Graellsia isabelae

Saturnia pyri

Phyllodesma ilicifolia

Eriogaster catax

Family Sphingidae Celerio wilsoni perkinsi

Euproserpinus euterpe

Euproserpinus wiesti

 Ex? Hawaii (U.S.A.) Ex? Hawaii (U.S.A.) I U.S.A. Ex [Hawaii (U.S.A.)] I Canada, U.S.A. 	I Hawaii (U.S.A.)	I Hawaii (U.S.A.)	I U.S.A.	I F.R.G., Switzerland, U.K. K Sri Lanka K Azerbaijan (U.S.S.R.) I F.R.G. I Switzerland I F.R.G. I F.R.G. I F.R.G., Italy V F.R.G., Italy V Central Europe I Northern Europe I Northern Europe
Hilo Noctuid Moth Lovegrass Noctuid Moth Kaholuamano Noctuid Moth Lemmer's Noctuid Moth Ceromatic Noctuid Moth	Nihoa Eupelmus Wasp	Nihoa Sclerodermus Wasp	Antioch Mutillid Wasp	Sri Lankan Relict Ant Caucasian Relict Ant Ravoux's Slavemaker Ant European Red Wood Ant Red Wood Ant Black Bog Ant
Hypena neweili Hypena plagiota Hypena senicula Lithophane lemmeri Peridroma porphyrea	Order HYMENOPTERA Family Eupelmidae Eupelmus nihoæensis	Family Bethylidae Sclerodermus nihoaensis	Family Mutillidae Myrmosula pacifica	Family Formicidae Anergates atratulus Aneuretus simoni Aulacopone relicta Camponotus aethiops Camponotus fallax Camponotus universitatis Epimyrma groesswaldi Epimyrma ravouxi Formica aquilonia Formica lugubris Formica rufa Formica transkaucasica

Ectemnius fulvicrus

Nesoprosopis (57 speci

Nesomimesa kauaiensis

Nesomimesa sciopteryx

Philanthus nasalis

Nesomimesa perkins

Ectemnius nesocrabo bi

Eucerceris ruficeps

Ectemnius haleakalae

Ectemnius giffardi

Family Andrenida Perdita hirticeps luteoci Perdita scitula antioche

Odynerus soror

Deinomimesa hawaiien:

Deinomimesa punae

Ectemnius curtipes

Leptothorax goesswaldi

Myrmica bibikoffi Myrmica slovaca

Formica uralensis

Nothomyrmecia macropa

Polyergus rufescens

Family Vespidae Odynerus niihauensis

K Moluccas (Indonesia)		V Equatorial Tropics	V Southern Hemisphere I Tasmania I Tasmania I Tasmania		K North-east Atlantic CT North-east Atlantic, Mediterranean
Wallace's Giant Bee	Phylum ONYCHOPHORA	Peripatus (10 genera)	Peripatus (12 genera)	Phylum ECHINODERMATA	European Edible Sea Urchin Purple Urchin
Family Megachilidae Chalicodoma pluto	Class ONYCHOPHORA	Order ONYCHOPHORA Family Peripatidae	Family Peripatosidae Dendy (3 species) Euperipatoides sp. "leuckarti" Ooperipatellus insignis	Class ECHINOIDA	Order ECHINOIDA Family Echinidae Echinus esculentus Paracentrotus lividus

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The Red Data Book concept, originated by Sir Peter Scott in the mid-1960s, aims to focus attention on the plight of the earth's vanishing wildlife. The concept has been outstandingly successful and, over two decades later, many national, regional, and global Red Data Books have been published, with many more countries in the process of compiling their own lists of threatened species. The information provided in national and regional compilations will inevitably be more detailed than the global overviews produced by IUCN. There is, however, an increasing demand for an international list that categorises the status of globally threatened taxa, and it is to meet this demand that the *IUCN Red List of Threatened Animals* has been produced. This edition is an update of the 1988 Red List, and new editions will be published on a regular basis.

Produced from the databases of the World Conservation Monitoring Centre, the Red List presents, for each threatened species, the scientific name, the English vernacular name, the IUCN threatened category, and a brief description of the animal's range. This is followed by an index to the list based on the order, family, and generic names, with vernacular names for major groupings. Also included is an essay on the role of captive breeding in the conservation of species, prepared by Dr Nathan Flesness and Dr Tom Foose of the IUCN/SSC Captive Breeding Specialist Group. A guest essay is a regular feature of the IUCN Red Lists.

Whilst the length of the Red List makes depressing reading, the information it contains should be of fundamental value to conservationists.

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A contribution to GEMS-the Global Environment Monitoring System.





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